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"Without Classical Studies"

By MILTON HAIGHT TURK

The Hobart "English Course" of 1824

IN 1824 Hobart, then Geneva, College took the lead in an educational development of far-reaching significance, though to this day, as an authority remarked recently, "Nobody knows it!" This undertaking was the establishment of the first college course without Greek or Latin introduced into any college in the English-speaking world. The declared object of the exclusion of Latin and Greek was to make room for applications of science useful to farmers and business men, and save time—a purpose wholly practical. The wider result, however, was certain to be the opening of the college field to all subjects equally. The college course of that day provided, as now, for concentration and distribution; but concentration was for Greek and Latin only, distribution for everything else.

Once make the classics optional, and any other subject would have its chance, and all others an equal chance, for they had all, save perhaps one, been equal in unimportance. The outcome would inevitably be a curriculum of the modern type, permitting specialization in any field. On such foundations, in principle, rose the whole American educational project, with its omnibus A.B.'s, its huge state universities, its proposal to give anybody who wants more instruction anything he cares to learn. The separate school of technology might meet the farmer's or trader's needs, but only a movement within the old-time college could put the old-time subjects upon an equality, and thus with equality give liberty to the liberal arts! It must not be forgotten, in passing, that the century just past had seen two great revolutions. Innovation could hardly be strange to that age.

The tale of this educational enterprise ought to be told, and it is fortunately not without quaint features.

In the year 1824 the trustees of Geneva Academy in Western New York, out of which grew Hobart College, had for two years been operating under a provisional college charter, which was to become permanent when a certain amount of endowment had been obtained. On March 1, 1824, Samuel Colt and William Steuben deZeng, as a committee of the trustees, issued a printed letter, in which, after citing the importance of "an unprivileged equality," the value of "a general diffusion of useful knowledge," and "the present extensive application of the discoveries in Chemistry to improvements in Agriculture and the various Manufactures," they proposed to institute in the new college,

> besides the regular Course of Study pursued in similar Institutions, a totally distinct Course, in direct reference to the practical business of life, by which the Agriculturist, the Merchant and the Mechanic may receive a practical knowledge of what genius and experience have discovered, without passing through a tedious [*sic!*] course of Classical studies.

THERE were, indeed, other stirrings in the educational field during this decade—gropings perhaps toward a closer linking of American education with American life. An American Literary, Scientific and Military Academy was founded at Norwich, Vermont, in 1819; in 1823 Benjamin Hale, later president of Hobart, headed the Gardiner Lyceum at Gardiner, Maine, which proposed to teach surveying, navigation, and mechanics. Neither of these institutions, however, was of college grade, and neither seems to have had much success. In 1824, Harvard and Lafayette apparently discussed some changes in curriculum in the Geneva direction, but did not make them.

Late in the same year came a really significant movement. On November 5, 1824, eight months after the Geneva deliverance, Stephen van Rensselaer declared the Rensselaer Polytechnic Institute at Troy open to teach "the application of science to the common purposes of life"; it was incorporated March 21, 1826—the first separate school of science and of engineering in any English-speaking country. In 1825, likewise, Thomas Jefferson announced for the University of Virginia a broad curriculum of ten subdivisions, in which science had its due place. But the Geneva letter not only laid out a different plan from either; it was also in point of time well in advance of both. And it was followed almost immediately by an eight-page pamphlet, dated 1824, in which the whole problem is discussed at length.

> Our collegiate institutions have heretofore been established with the design of preparing young men for the learned professions. . . . So obviously is this the fact that a young man who after leaving College turns his attention to merchandise or farming, is considered as having in a great measure lost four years of his time. . . . All the advantages he obtains of literary and scientific information might be gained under another system, and . . . at a far less expense of time. In our Colleges, Chemistry, Mathematics and Natural Philosophy are taught as liberal sciences, both for the sake of the discipline they give to the mind, and because a general knowledge of their

principles is absolutely essential to him who would be esteemed a scholar. Geneva College . . . will also teach them practically.

The prospective farmer will learn about soils and manures, the manufacturer about dyeing and tanning, and so on. Since the "divines, physicians and lawyers have Colleges erected to give them four years of preparatory instruction, . . . is it not time that some particular attention should be bestowed upon the education of farmers, mechanics, manufacturers and merchants?"

THIS, however, was not all the writers of the pamphlet had to say; there was also the question of funds. College professors are fairly adept at partial starvation, but when entirely starved they die. The trustees had had three years in which to gather an endowment yielding $4,000 per annum; in March, 1824, only a year remained, and more than half the money was still to be raised. Their great friend in New York City, head of the Episcopal church in the state, Bishop John Henry Hobart, was ill and abroad from 1823 to 1825; they had to find this money in the Genesee Country and to devise means of their own to get it.

They then set about what must have been one of the first college money-raising drives undertaken in America. Heretofore, no college in the state had started without the use of a lottery; they eschewed that. In its stead, however, they were forced to adopt the extraordinary certificate plan—a scheme by which, in effect, in order to obtain their endowment they undertook to give away a good deal of their income.

The 1824 pamphlet not only sets forth the advantages of the new curriculum, but also contains an appeal of a different character. The incorporators do not ask a mere gift; they offer a *quid pro quo*. Their agents who scoured the adjoining counties, carried in their hands certificates which stated in due form that the subscriber, having "paid $100 to the Funds of Geneva College, is himself, his heirs and assigns, entitled to the privilege of sending one student to the Geneva Academy, or to Geneva College, free of tuition fees, for twenty years, commencing from the date hereof, or at any time he may choose." A great many of these certificates were issued, representing much more than one-half of the money collected locally to complete the initial endowment of the College.

Thus began an Iliad of woes. In the first place, the trustees were met at once by a demand on the part of the subscribers for the continuation of the Academy along with the College. At their second meeting as a college board they listened to the report of a committee setting forth, with apparent justice, that the mention made of the Academy was intended merely to obtain a return to the subscribers in case the College were not established and only the Academy remained to meet these obligations. The subscription was "to the Funds of Geneva College"; it was only in order to raise the academy to a college that the subscription had been asked and made. But the farmers of Western

New York in those days had practical minds: many of them came from New England. A twenty-year certificate gained greatly in value if it could be used as soon as a son was able to read! And the certificate certainly said, "to the Geneva Academy or to Geneva College."

The trustees agreed with their committee; they provided at this meeting for a sub-freshman class, but went no farther. Nevertheless, in December, 1826, we learn that they had already established the "Academic School," which opened January, 1827. This school, set up for pupils who would pay no tuition, was not likely to lighten their burdens; in 1834 they were able to terminate its existence.

But not the existence of the Certificates! The 1826 Announcement says:

> The Certificates held by the subscribers are of the same nature with Bank or Insurance Stock: they may be sold or otherwise transferred like other stock, and at the decease of the owner go to his heirs and assigns in the same manner with other property.

There was, in a word, no end to them. Year after year back came these little old men of the sea, to perch upon the weary shoulders of the educational Sinbads of the Genesee. The original trustees might pass to their account, but this account must remain unsettled. Values might change, prices rise, "good boarding" become no longer obtainable in Geneva for "one dollar or one dollar and twenty-five cents per week:" the certificates were still good—are good today—will be good forever—until expiated by free tuition for twenty years!

In this way, however, the sum was at last made up, and in February, 1825, the trustees received their permanent college charter. Surely, no board ever faced a more difficult task. The only church to which they could appeal was locally little more than a western mission, while New York City Episcopalians had done all they thought should be expected of them. The board had exhausted every form of persuasion and inducement in gathering their little endowment; they were under obligation to give free instruction to an extent which only Providence could determine; they were engaged—last but not least—to conduct besides the regular course, a new course, without precedent in American colleges, requiring additional teachers, and expensive books and apparatus, most of which must be imported.

AT THEIR first meeting after the receipt of the permanent charter, the trustees passed a resolution establishing the "English Course." In the original letter of March 1, 1824, the work is sketched in three departments or divisions, as follows:

1. Under the English Professor they shall study the *Philosophy of English Grammar*, *Geography*, *Rhetoric*, *History*, *English Composition*, *Moral Philosophy*, *Logic*, *Metaphysics*, *Evidences of Christianity*, and shall practise *Public Speaking*.

2. Under the Professor of Mathematics they shall study *Geometry; Trigonometry; Land Surveying*, theoretical and practical; *Mensuration*, generally; *Navigation; Levelling*, with reference to *Canals* and *Aqueducts; Hydraulics*, as applied to machinery driven by Water power; *Steam power; Natural Philosophy*, and

Astronomy, with the use of *Mathematical Instruments*, the principles of *Architectural* proportions and *Bridge building*, *Drawing of plans*, etc.

3. Under the Professor of Chemistry shall be studied *Chemistry;* the principles of *Dyeing*, *Bleaching*, etc.; the fertilizing qualities and effects of different *Substances; Mineralogy* and *Botany*.

Apparently in 1824 the so-called English division was to furnish the literary element in the new curriculum. If so, this was soon felt to be a mistake, for in August, 1826, the addition of a professor of French is announced, and in December of that year the English course, originally planned "to consume at least two years," is laid out on a three-year basis. It obtained students at once, and, while at the first Hobart commencement in 1826 only classical students were graduated, in 1827 the first English diploma was awarded to Henry Smith Attwater, of Ogdensburgh, whether for a two-year or a three-year course does not appear. Soon, at all events, the course was put on a three-year basis, and later extended to four years.

THE undertaking of these gentlemen was now so far accomplished. By "exertions unparalleled in this state," as a senate report observed, they had established Hobart College and its new curriculum; they had now to maintain and conduct both. They were men of prominence in Western New York—leaders in the professions, in business and philanthropy, legislators, soldiers of 1812. They spoke for a half-million people, and from the leading town in their district. Rochesterville was an infant village as yet, while Geneva was something of a commercial, social, and religious center.

While Bishop Hobart's enthusiastic and determined initiative had given him the right to be regarded as the founder of the college which was soon to bear his name, the dominant and continuing factor in the enterprise, during at least its first quarter-century, seems to have been the natural wish of the pioneers of the Genesee for a college in their own country, and one in which their agricultural and commercial interests should be duly considered. It was local effort that, aided by the desperate device of the certificates, had finally completed the endowment, and upon these local trustees rested the responsibility for the continuance and success of the new institution. They took immediate steps.

Early in 1824 the Assembly Committee on Colleges, Academies and Common Schools, with B. Whiting, of Geneva, chairman, had already reported in favor of a grant of $20,000 for a building at the new college, the reasons being ample precedent and the hitherto unrecognized claims of "the West." Nothing came of this, but on February 23, 1825, a fortnight after the granting of the full charter, the Senate Committee on Literature made a report, more detailed and of different content, in favor of a larger grant. The claims of "the West" are urged, of course; with wistful approbation it is pointed out that already the State had given $113,000 to Columbia College, $106,000 to Hamilton, and $418,000 to Union

(Schenectady is nearer Albany than New York or Clinton, and Eliphalet Nott was a man of mark!). Shall this new undertaking "languish," or shall "the blessings of liberal education" be extended "among a worthy and patriotic people, who have hitherto never participated in the grants for literary purposes"!

So far this is an elaboration of the Assembly report, sometimes in the same words; then the Senate Committee introduces fresh grounds for the grant. There is to be a new curriculum, alongside the old, in "direct reference to the practical business of life, calculated particularly for the agriculturist, the merchant, the manufacturer and the mechanic, without the loss of time and expense for a course of classical studies." The appropriations recommended are largely to support the new undertaking: "$2,500 for a complete chemical apparatus, $7,500 for a complete philosophical apparatus, $2,500 for scientific reference books, $10,000 for a general library, and $32,000 for a building. This proposition also failed. Evidently, Ontario County had not then the influence at Albany which it was to enjoy later on, for not only could the proposal cite ample precedent, but it was of considerable real merit. Was the popularization of education unpopular with the educated, or was the Genesee moving too fast? In 1834, however, the state put up the first Geneva Medical School building, and a little later the legislature made an annual grant of $6,000 to the College, "to be applied exclusively to the payment of its professors and teachers." This aid, continued for ten years, must have been invaluable, while so much free tuition was still necessary.

More important than all other things, however, to the new college and the new course was the choice of Benjamin Hale as president in 1836. Hale was a teacher-clergyman of the type familiar in the English church. He was a true liberal. "I value my own religious liberty too highly," he said in his inaugural address, "to design any infringement on that of others." But, more than that, he was himself a teacher of science and a leader in the diffusion of such instruction. He had been president of Gardiner Lyceum, and thereafter for eight years professor of chemistry at Dartmouth. Hale's election—he was to serve twenty-two years—was a guaranty of the survival and persistence of the forces behind the new course, to which the new medical school already was bringing aid and comfort.

WHAT did the new course accomplish? That is more difficult to say. Hobart was, in this movement, far ahead of its time. That its founders asked each professor to occupy not a chair, but a settee, need not surprise us; that was so everywhere. But with all the means in the world, they could not drive ahead of them the patient processes of experiment and research. From the strictly practical point of view, their central subject was perhaps chemistry. "From 1800 to 1845," says President Thwing, "chemical studies grew slowly but firmly." So, apparently, did the new course at Hobart. As might be

expected, of actual work in the field, which was a dominant feature at Rensselaer, we have little or no evidence here. On the other hand, records show the purchase, from France especially, of scientific apparatus and supplies in considerable quantities. Moreover, among the first professors employed by the College were Horace Webster, afterward first president of the College of the City of New York, in mathematics and natural philosophy; General Ducoudray Holstein, in modern languages; and Dr. Edward Cutbush, in chemistry, agriculture, and mechanic arts. On the whole, this new so-called "English course" at Hobart was, allowing for the conditions of research and teaching a century ago, about what it still is—what hundreds of other college curriculums have now become—a course in letters and science without Latin or Greek, and with a certain practical bent. Though widely so called, it is not a scientific course—a course in pure and applied science—but a course in the liberal—some might say emancipated—arts.

OUR pioneers did not lack early imitators. "This idea of connecting an English with a Classical Course of instruction," says the Geneva Address of December, 1826, "was first adopted by us, and has been thought so valuable that it has been introduced by at least two of the Colleges in New England." Amherst and Vermont were evidently the institutions in question. Amherst announced a course in which French and Spanish took the place of Latin and Greek, and Vermont made what Monroe's *Cyclopaedia* calls "a similar abortive venture." Apparently, twenty years were to pass before any college other than Hobart successfully conducted a course of this type.

Hobart had certain advantages, no doubt; with its heavy commitments it had also some immunities. It was a brand-new institution: there were no faithful and entrenched professors taking their ease, each in his favorite Zion; no established group devoted to the college and disposed to preserve it from improvement! And second, Hobart was in a new country. We must put ourselves back and remember that Geneva was "in the West." The Genesee Country had filled up rapidly after the Revolution; but it was still thought of as new. Politically it was new; religiously it was a mission field; the College itself was an educational mission. From this condition arose their financial difficulties, but in it lay the opportunity of our innovators; they could break paths where none had trod before.

This educational undertaking, then, beginning in what was then the West, moved on with our advancing boundaries. Each new frontier faced the same problems and could profit by the same solution; indeed, with their all-embracing curriculums, the great state universities which became a characteristic of American education outside the northeast were apt greatly to better any instruction. Hobart, on the other hand, ceased to be in the West—ceased altogether to be western; stood resolutely by what it had done, but moved further slowly. Only recently has Hobart reached the

point of granting the A.B. without college Greek or Latin—only a short time before Yale!

In her ebullient youth Hobart had spoken of a "tedious" course in Greek and Latin. Now, there are many tedious instructors, God knows; but there are no tedious subjects. It is a pity that the treasures of the classics are to be found on mountainous heights of inflection and syntax, but there are climbers for all mountains. The question was really one of time—not whether Greek and Latin were worth studying, but whether science and modern literature were therefore to be neglected, and those few years of youth filled with paradigms. The answer was a substitute course: let the clergyman or lawyer go on with his classics, while the prospective farmer or business man entered new fields. It was an early and limited application of the elective principle, and the course resulting was not merely the first parallel non-classical course. The old classical course, which in the East maintained its ascendancy for a long time, has definitely lost its central position now. The new Hobart course of 1824, on the other hand, with the early addition of a foreign language, represents pretty fairly the general line of American college work today. In an academic procession a century long many later and more impressive figures bar these pioneers from view; yet they have their place, and no mean one. They cut through three centuries of educational tradition and took the lead in extending the aims and privileges of American education, and in bringing the blessings of freedom to the liberal arts.

Some Anticipations

By DAVID SNEDDEN

American Colleges and Universities in 1980

IF THE American institutions of higher education continue for the next fifty years to grow in magnitude and to assume new functions as they have done since 1880, what will they be like in 1980? And another "if"—suppose that these prospective expansions and these adoptions of new functions should during the next half-century be guided far more than was practicable earlier by fairly scientific prevision of best services to be rendered, by fairly scientific determinations of means, methods, and adaptations of their working to varying types of students, and by really scientific training of college teachers for their work—then what?

For convenience of terminology, the first anticipation here expressed will be: that presently all distinctive higher teaching institutions, professional as well as liberal, will be called "colleges"—instead of the older term "schools"—for training agencies for the professions; that all distinctive research agencies will be called "institutes"; and that a university will be simply a federated aggregation of liberal and vocational colleges and of institutes.

Columbia University, as an example, consists of three liberal-arts colleges, Columbia, Barnard, St. Stephens; a number of vocational colleges, now denominated professional schools, of law, medicine, engineering, architecture, journalism, education, practical arts, (college of) pharmacy, business, dental surgery, and library service; certain faculties of graduate study, in political science, philosophy and pure (natural) science; certain specialized divisions for research, in the social sciences, in the humanities, in cancer research; and certain other comprehensive organizations of instruction, summer session, university extension. Such an expanded university is, as the president of Columbia said in his report of 1930, a "federation," presenting interesting analogies to the United States as a federation of commonwealths, each of which has assigned to the central agency certain functions, retaining full responsibility for others.

The evolutionary processes which have added new institutions to the original Columbia College began in 1858 with the organization of a professional School (College) of Law. Additional expansions have been especially numerous during the first third of the present century. On the assumption that the present economic depression proves no more permanently arresting to fundamentals of

America's growth than have earlier depressions, what are some prospects which can be reliably forecast for 1980, for Columbia, and for more than a score of other American universities? All large American universities are alike expanding federations of colleges. The problems of any one, especially as regards optimum functions of member colleges, of interdependencies between vocational and non-vocational colleges or departments, and of further expansions and differentiations of offerings, are largely the problems of all.

It is here intended to hazard some personal forecasts as to probable evolutions of American colleges which it is believed will attend more scientific study of optimum functions of such institutions during the coming half-century, in answer to these three queries: Will many more kinds of vocational colleges be added or differentiated? What will progressively become the functions and constitutions of graduate teaching and research departments? What will finally be the functions and constitutions of liberal colleges or their equivalent undergraduate departments of arts and sciences?

IN OLDER universities only three learned professions were provided for—law, medicine, and theology. Now Americans talk vaguely of engineering, teaching, and nursing as professions. Actually, however, the large modern university is evolving and will continue rapidly to evolve scores, if not hundreds, of distinctive colleges to give specific vocational training for those higher vocations, which with the elaboration of activities are in effect the newer professions.

There is no longer one profession of engineering but more than a dozen—with little beside the name and a few chapters of mathematics in common, as between, for example, chemical engineering and civil engineering. The "Teachers College" of Columbia University is in effect an aggregation of forty or more professional colleges, one of which trains mature teachers to be superintendents of schools, another trains home-economics teachers, and a third of the forty trains kindergarten principals.

Already at least a half-dozen nursing professions are in process of rapid emergence—and, in spite of oppositions of veteran trainers of nurses, each of these half-dozen is certain presently to evolve its own completely distinctive program of vocational training. The up-to-date "medical college" is becoming a "medical center"; that is, a center, now of five or ten, and presently of twenty or fifty colleges, each training for a distinctive profession working toward health conservation.

The larger universities have recently evolved professional "schools of journalism." But who, in fact, is "a journalist"? The modern newspaper has reporters, editorial writers, financial specialists, illustrators, managers—all, we trust, rising steadily toward "professional" levels of competency. Presently there must be a half-dozen distinctive colleges preparing for the several journalistic professions.

Even more proliferations are likely to subdivide "schools of business

administration." It is safe to prophesy that presently all "leadership" places in business—superintendents, directors, executives—will be ranked with the older professions, not only in prestige and influence (as they are now), but as respects requirements of technical preparation. For logical completeness, let us embrace all forms of business leadership as "managerial" professions—all involving management of large numbers of workers and materials. Then we can distinguish and classify "managerial professions" as those of armies, of navies, of school systems, of hotels, of railways, of department stores, of banks, of great farms, of insurance companies, of newspapers, of mines, and of some score of others, including even "city managers." We already have distinctive professional colleges to train army managers, ship managers, and school-system managers. We have at least one to train hotel managers. We are almost certain to differentiate at least a score of others presently out of our "omnibus" schools of business administration.

Much uncertainty of educational purpose and planning has heretofore persisted because of unwillingness of academically minded educators to face the full implications and responsibilities of vocational training for the professions. Our original colleges of law and medicine did not actually train for practice. They only gave lectures and textbook courses on certain phases to supplement apprenticeship learning. Even yet almost none of the thousand American colleges actually give our high-school teachers any "full competency" training for the score or more possible secondary-school teaching vocations.

And there are even yet many "half born" or nascent professions for which some liberal-arts courses are widely believed to be valuable prerequisites. But as we build a clarified science of educational values, there seem to be no good reasons why all such nascent vocations should not be given searching diagnosis in early stages and then appropriate curriculums of full-fledged or part-fledged professional training be devised for them.

During the next fifty years, then, it is predicted that the number of distinctively professional colleges within our larger universities will greatly increase. Each one will focus its training processes even more sharply than at present toward producing superior proficiencies in some one of the increasingly specialized professions in which the technical or leadership work demanded for the world is done. And we trust that each will presently discard academic philosophizings about "background" or "fundamental" or other vaguely evaluated courses. These represent in fact carry-overs or rationalizations by professors of academic or purely aspirational prepossessions who are prone to conceive the professions romantically.

WHAT of the future of graduate courses, graduate departments, schools of graduate studies? In large measure, these are now the nurseries of the undifferentiated or meagerly differentiated professions earlier referred to. Suppose there were scat-

tered among the larger universities of the United States six professional colleges devoted solely to the work of training first-class instructors for undergraduate liberal-arts colleges. Suppose there were one great vocational college in the entire country specialized for superior training for each of these prospective professions: archaeological-research specialists as a profession, researchers in organic chemistry as a profession, forestry experts, social workers with dependent children, professional economists, and many other similar fields of advanced specialization. Under such conditions what would be left of our "graduate" courses and so-called "graduate schools"? In all fields of study in which well-endowed research has long been in progress what opportunities for really new and valuable research remain for the graduate non-professional student, in candidacy for a Doctor's degree? Probably little of importance.

With exceptions to be noted later (graduate stages of liberal-arts colleges) it is inferred that most of what now constitutes graduate studies will have been evolved into distinctively professionalized curriculums, and that one or a few centers will provide ample training service for all needs.

THE central functions of the American liberal-arts college, or its equivalent "departments of arts and sciences" in western universities, are now badly defined. Large proportions of so-called "liberal" courses have been believed to have prevocational, preprofessional, prebusiness, values. Professors of natural sciences, mathematics, English-language branches, social sciences, and the like have constantly alleged to credulous students and citizens that these studies were "foundations" to later economic success. Debate on "Does a college education pay (financially)?" has nearly always been decided in the affirmative, unconsciously on the *post hoc*, of the ability selecting powers of such agencies, rather than the *ergo propter hoc*, of evidence of the actual vocational functionings of collegiate learnings.

Now, with the multiplication of professional or quasi-professional vocations into which men of collegiate rank wish to enter, the situation of the liberal-arts college becomes badly confused. Professional colleges naturally desire mature and hand-picked students. They desire, too, to have students come with substantial preparatory or basic learnings, vaguely defined and evaluated as these still are. Then, too, there persist beliefs, which are probably wholly academic illusions, that it is somehow important, if not to prospective professional people personally, at least to their social usefulness, that some "liberal" (college) education should be acquired as "background" for the higher vocations.

Under these conflicting pressures the present-day liberal-arts college has been distorted and artificialized. Many observers have predicted its doom. Some institutions have tried to vivify and preserve its lower half as a "lower division" or junior college. But there still persist confusions of "liberal" with "prevocational" functions. Lower division or

junior-college classes are crowded with students who have no heart for more "liberal" education than they got in high school, but who are perfunctorily meeting "prerequisites" in order that they may buckle into realistic professional studies. The present situation seems to be a good deal of a mess. The president of Columbia University put the case mildly when in 1930 he said: "The intermingling of training in the essential elements of a liberal education with the studies chosen in preparation for the practical affairs of life has brought about odd and sometimes unfortunate results." The present writer's valuations can be inferred from the following "forecasts."

In 1980 there were in the United States about one thousand liberal-arts colleges—some two-thirds under public support and one-third endowed by religious or other philanthropic foundations. All had "junior" divisions two years in length, and about half had "senior" divisions. And some one hundred of them, usually in the largest universities, had "graduate" divisions. Degrees of "Associate," "Bachelor," and "Master" (A.A., B.A., M.A.) were offered at the end of each respective division.

These liberal colleges offered no avowedly preprofessional or other "prevocational" courses—not even for the teaching professions. None of their courses were "required," or even accepted for credit, by the hundreds of kinds of professional colleges then in operation.

The functions of these liberal colleges were exclusively to extend, diversify, and enrich the strictly non-vocational learnings of young Americans beyond the levels reached in the lower schools. The two major divisions of these non-vocational studies were the "civic" or political leadership and the "personal cultural"—or together the "liberal" studies. "Health-conservation" studies and pursuits constituted one minor; a second was family-membership studies; and a third embraced "personal-religion" studies.

No particular studies were "required" of all students in these colleges. Each student could "elect" from the riches of courses in literature, natural science, social science, history, music, geography, English speaking and writing, foreign language, indoor avocations, outdoor avocations, and the like, those offerings in which he had strong interests and from which his advisers believed he could derive much profit.

By 1980 all purposed interdependencies of liberal and professional colleges had come to an end, and especially those interdependencies which had tended from 1900 to 1930 to make liberal-arts colleges simply glorified preparatory schools to the professional colleges.

Each type of professional college had its own standards of admission, in measures of native mental ability, maturity, previous experience, and the like. For example, all "managerial" colleges required a minimum age of twenty-seven for admission, and at least four years' successful experience in operative work in some division of the fields over which training for managerial responsibilities was sought. Professional colleges

for nurses and elementary-school teachers required a minimum age of twenty and an intelligence quotient of 110, while medical colleges admitted no students under twenty-one years of age.

But each type of professional college assumed entire responsibility for all "studies" required for its degrees. If the vocation called for articular learnings of mathematics or a foreign language or natural science or literature or manners or body powers or social science, the professional college itself provided these as needed. Almost never, it was found, could high-school or liberal-college studies, taken for purposes of cultural or civic education, be valued as really "functional," prevocationally or otherwise, for the vocation.

Thus the liberal college was entirely freed, first, to offer courses only of proved functional significance for civic competencies, personal cultures, and other non-vocational achievements; and, second, to dispense with any and all students whose interests in liberal studies were purely perfunctory.

The Stephens College Fiscal Policy

By JAMES M. WOOD

The Student Pays the Actual Cost of Instruction

HOW is it that Stephens College with limited endowment resources is able to balance its budget for the nineteenth consecutive year when so many endowed colleges are encountering difficulties? The answer to this question is found in the basic philosophy that underlies the fiscal policy of Stephens College. Briefly, it is this. The primary function of a college endowment is to insure the financial integrity of the institution and not to balance its normal operating budget. For nearly two decades Stephens College has maintained the position that the student should bear the actual cost of instruction after the funds of the College have provided school buildings, equipment, and grounds. The lack of co-ordination between endowments on the one hand and educational programs and faculty salaries on the other, as indicated in the recent studies of college finance by Reeves and others, justify a wider application of this philosophy.

Since the function of higher education has changed from the medieval emphasis upon community service to the modern conception of increased economic independence for the individual, it has become necessary to consider seriously the problem of a more equitable distribution of the cost of this instruction between the community and the individual student. The community which profits largely from the services of a trained citizenship should bear a considerable part of this cost. The individual whose earning power is doubled, trebled, quadrupled by such higher instruction should bear his just portion. Such an equitable distribution can be made only by ascertaining the relative importance of such higher education to the individual and to the social group. Society may well provide a capital investment adequate for buildings, grounds, and equipment. This provision should cover the original outlay. The college itself should establish against its current operating budget a depreciation fund sufficient to make necessary repairs and replacements. Thus the student assumes responsibility for such part of the physical plant as may be legitimately charged to his account.

Society should provide an endowment fund. The present requirement of $500,000 as established by the North Central Association of Colleges and Secondary Schools is probably more than sufficient to meet the needs of the four-year liberal-arts college. In this connection, however, it is

necessary to redefine the term "endowment." Our previous conception of the function of the endowment must be modified. The income from this source should not be looked upon as revenue for meeting current budgets and for reducing the cost of instruction to the individual student. As already stated, the function of an endowment is to insure the financial integrity of the college. The income should be used in all cases for creating a liquid reserve fund for meeting emergency situations. An analagous situation is to be found in the requirements made upon a banking institution, the financial security of which is insured not only by the integrity of its officers, but by capital investments and an undivided surplus of its profits.

Let us suppose that, under existing practice, a liberal-arts college has prepared its current-expense budget on the basis of tuition and other fees from an expected group of five hundred students. For some unforeseen reason this number of students is reduced to four hundred. From what source is the institution to draw the difference between its legitimately expected income and that actually received? Against such and similar emergencies its financial integrity demands a reserve fund such as is here advocated. This fund should be sufficient to provide for all legitimate needs until the institution is able to reduce its operating-expense budget to the basis of four hundred students, or to increase its student body to the former level.

The objection is raised that when the income from endowment sources is no longer to be used for the reduction of tuition fees the college closes its doors to the student of moderate resources. A study of statistics will hardly tend to justify this conclusion. The American boy is not a mendicant in other fields and does not expect to be so branded. Why should one persist in offering him the privilege of doubling, trebling, and even quadrupling his earning power without at the same time demanding that he pay his legitimate part of the expenses incident to such training? An educational institution should not in any case be run for profit; neither should it give to one student that which has been intrusted to it for the use of many. Instead of large endowment funds, designed to reduce the charge for education below the actual cost of production, society should provide adequate loan funds from which worthy students may obtain such financial assistance as may be necessary to the completion of their training. These loans should bear the normal rate of interest, should be obtained very largely by the personal integrity of the student himself, and should not have compulsory maturity until some years after his graduation.

Society should also provide a comparatively small number of scholarships. These scholarships should be used solely to meet emergency situations such as physical disability or extreme poverty of individuals of intellectual, spiritual, or social worth.

Society should also support with special funds those non-remunerative departments in which it may have a special interest. The practice of churches in contributing toward meet-

ing deficits in the current budgets of colleges is wrong. On the other hand, it is not right for these churches to impose upon the college the task of giving religious training to the student body without first having made adequate provision for the financing of such instruction. Likewise, research programs that are designed to affect the public at large or future generations of students should be cared for by special funds.

When society shall have rendered the assistance already suggested, the actual cost of instruction in a given college should be assessed pro rata against the student body attending that institution. This cost should cover those items normally included in the current-expense budget and should provide adequate funds for the ultimate replacement of buildings and equipment. While the public can in no sense be relieved of responsibility for the institution that it has fostered and that has unselfishly served its interests, such assistance should be rendered in accordance with sound business principles by providing emergency funds for the institution and for the individual student. The ultimate aim should be complete economic independence for both. Not only can this be done, but faculties can be paid adequate salaries without making the tuition fees exorbitant. [Vol. IV, No. 7]

The Unit-Cost Plan of College Finance

By HAMILTON HOLT

Students at Rollins Who Can Afford to Will Pay for Their Education

BEGINNING with the academic year 1933–34, Rollins College will adopt a program entirely new in college finance. Although it has been recently advocated in principle by officers of the General Education Board and other educational experts, Rollins, it is believed, is the first American college to put it into practice.

At the present moment it costs a student to go through Rollins about $900 per annum, but it costs Rollins to furnish board, room, and tuition to the student approximately $450 more than that. In other words, if the son of a Henry Ford or a John D. Rockefeller should matriculate at Rollins he would pay $900 annually for his education, and other benefactors of Rollins who have contributed large or small amounts to our endowment would pay the other $450. Reflection will convince anyone that this is not the correct use of endowment income. Yet this is the situation

as it exists in Rollins today, and it is typical of probably every other institution of higher learning in the country. The United States Office of Education, for instance, has published a report on the receipts of privately endowed institutions of higher learning for the years 1923–24. At that time a little less than one-half the current expenses of our endowed colleges and universities came from students' fees, about one-quarter from the interest on endowment, and another quarter from gifts and other sources. In other words, the students paid less than one-half of the cost of educating them.

The reasons for this state of affairs are largely historical. Our privately supported American colleges were originally founded as "charitable" institutions. It was expected that they would be maintained by gifts from philanthropic people. An education at such a college was virtually free, for it was assumed that the students graduating therefrom would go into the ministry or teaching, or other public-service professions in which the financial returns to them would be small but the gains to society large. Today, it is probably not an overstatement to say that a majority of the students go to college for business or social considerations. The idea of professional service to society is certainly no longer the chief consideration of the majority.

It would seem, therefore, that under these changed conditions the well-to-do students should be expected to pay for the benefits received, and the endowment income and gifts hitherto distributed equally throughout the student body should go to those who are unable to pay the full cost of their education.

TO REMEDY this anomaly the trustees of Rollins College have attempted to distribute costs more equitably by making the rich students pay more and the poor students pay less. The plan works out as follows:

1. It first budgets the college on an adequate but not an extravagant financial basis.
2. It divides the annual operating expenses by the estimated student enrollment, not to exceed five hundred.
3. It then fixes the cost of board, room, and tuition of the individual student as one unit-cost of the total which it is calculated will be $1,350 for next year.
4. It makes available the income of our present endowment—approximately $60,000 a year—plus any gifts which may be received for loans or scholarships to worthy and desirable students.

This Unit-Cost Plan will apply to all students except: First, those of approved standing whose parents are resident citizens of the community in which the College is situated. In recognition of the support of the community the College will grant a limited number of partial scholarships to the local students living at home. Second, those of approved standing now at Rollins who can affirmatively show that they will have to leave college if they are required to meet the increase. It is proposed to allow these to continue at the rate they are paying this year.

The Unit-Cost Plan is the third noteworthy step Rollins has taken in its progressive educational development. First, Rollins has attempted to humanize methods of instruction by discarding the prevailing lecture-recitation system of teaching in which the professor is active and the student passive, thus making learning a joint adventure on the part of both teacher and taught.

Second, Rollins and the University of Chicago are the first two American institutions of higher learning that have substituted "accomplishment" for "time-spent" as a basis for student rating, thus abolishing freshman, sophomore, junior, and senior years, and in their place substituting an upper and lower division in which the students devote their first two years mostly to generalization, and the greater part of their last two years to specialization.

Under the Unit-Cost Plan those students whose parents can afford to pay $1,350 will unquestionably take pride in meeting their obligations in full. I am sure of this because, during the last two years, an astonishingly large number of parents have voluntarily subscribed the difference between tuition and costs.

At all events, it is obvious that a man would prefer to give $1,350 in return for which the most precious thing he owns, a son or daughter, will get the most valuable thing in life—an education—than to donate $25,000 or $30,000 that would yield a $1,350 income. However, those students whose parents cannot pay $1,350 will have the opportunity of obtaining aid from Rollins through any loan, scholarships, and endowment income which friends of the College may make. Moreover, there will be no discrimination whatsoever, whether in the classroom, the dormitories, or on the campus, between those who pay in whole or those who receive aid. It should be especially emphasized that this plan does not contemplate applying any of the endowment income or student fees for new buildings. We still think that the services of Rollins College to society justify outside contributions for capital improvements. Judging by the past, we are confident that these great and pressing needs will be adequately met. It should be equally emphasized that any further addition to our scholarship, loan, or specified endowment funds will be made available to students who cannot pay the full cost of tuition.

The inauguration of the Unit-Cost Plan will not make Rollins a rich man's college. Even with the increased tuition, the costs of graduation from Rollins will be less than at a great many of the standard colleges throughout the country. With a minimum of $60,000 a year available for scholarships and loans, a sum which will certainly increase from time to time and which might conceivably grow so large that it would actually cancel all tuition charges, it is obvious that even now, proportionately to our enrollment, we shall be able to help more worthy students through college than most of the richer and older institutions operating under the old plan where endowment is distributed to rich and poor alike.

[*Continued on page 396*]

Colleges Need Russian History

By DORSEY D. JONES AND SOL MELTZER

To Keep Abreast with Present Social Changes

PERHAPS the greatest series of events in modern history are those radical changes inaugurated in the U.S.S.R.—a land covering one-sixth of the land area of this planet. It is perfectly logical that the innovations are strange and advanced ones, because the pendulum of life never swings moderately after a titanic struggle like the one which surged over the world in 1914 and the years following. Especially was this true in Russia where the czars had held the pendulum drawn so tightly to the right by the lines of conservatism and Russification. The lines were cut by the two revolutions of 1917, and the swing of the pendulum was just as far to the left as it had been previously to the right. At the radical extremity of the swing it was grabbed by the Soviets, and it has been held by them with unrelaxing vigilance ever since.

The coups d'état of 1917 were the result of a gradual development of a revolutionary spirit. It was manifested by the growth of radicalism among the intelligentsia as expressed somewhat mildly by the followers of Alexander Herzen and by the terrorism of the disciples of Michael Bakunin. It was further generated by oppression and discrimination against non-Russian nationalities; by the lack of a truly representative Duma; by terrorism exerted by the police; by the corruption of the government—especially in the war department; by the defeat of the army; by high prices, low wages, and little food during the war; by the desire of the peasant for land, and the spread of Marxist doctrines among the factory workers. Then, too, the generally illiterate furnished fertile soil for the seeds of discontent.

The most rapid revolutionary change is past, but step by step a unique state organization is molding something new in the way of political structure and control. Its final destination is the unknown quantity, but regardless of the future, all of what has been done by the followers of Lenin and Stalin has not been the proverbial "flash in the pan." Not all of the innovations have been crystallized or baked in the fires of time, but much has been done that gives evidence of permanence. Consequently, progressive educational institutions should arouse the bigoted from prejudice, propaganda, and misunderstanding by a careful consideration of the varied conditions in czarist Russia which were conducive to a development of revolutionary thought

among the intelligentsia and to receptive emotionalism among the dissatisfied masses. Whether one is hostile or sympathetic to the Soviets, he should not be pathetically ignorant of Russian history, because a proper understanding of it is a prerequisite to a comprehension of the drama now presented by the Soviets. Their system should be studied scientifically and criticized intelligently rather than be ignored by quarantining the mind, but this cannot be done unless there is a reasonably thorough acquaintance with the past. Indeed, many present writers endeavor to write about Red Russia, but "they are finding that much of revolutionary Russia is more Russian that revolutionary."

A SAGE once declared that geography lies at the base of history. Nowhere is this more true than in Russia with its vast expanses of plains, frozen tundras, rivers—"the roads that run," variations of climate and of natural resources. A stage setting like that peopled by myriad actors, and the searching spotlight of historical investigation furnishes an abundance of information as to why the revolution was inevitable under the Czarist régime and surely enables one to read newspapers and periodicals equipped with a mental gyroscope to safeguard sane thinking.

A course in Russian history should be made objective and impartial. Out of the superabundance of material written about Russia it is possible to get at the core of truth about Sovietism despite the fact that much contemporary literature is weighted with pros or cons. Let it be said, however, most of the background for such a course is so fundamental that in the usual one semester devoted to the study of Russian history perhaps three-fourths of the time should be allotted to the period through the year 1905. Surely a study of some six weeks on the following period would not be amiss. Whether one wants to admit any possibilities in Sovietism or to condemn it wholeheartedly, he must face it as an integral part of the history of the modern world. It is the function of the teacher to inform by giving facts and by stimulating intellectual curiosity, not to spread propaganda! Medical students study dangerous drugs, and chemistry students learn the properties of explosives. One surely would not condemn such sane teaching as they receive in these fields, so the conclusion is that when directed by a competent teacher the so-called "dangerous ideas" may be handled with the utmost safety. Danger in politics lies only in the hands of the ignorant, in the half-baked minds of the untutored, and among crafty, unscrupulous politicians.

It is the plea of these writers that enterprising teachers of history awaken to the opportunities in a comparatively untouched field as far as our present courses of study are concerned. They ought to abandon such ideas as, "We are living too close to the Revolution to know what it is all about," "Will its results warrant its study?" "I cannot read Russian," "What is the truth about Russia?" "We fear criticism for teaching about Bolshevism," and "There is not an adequate text." All

of these objections fail to stand, so let the reader judge whether the time of greatest usefulness of such teachers has been reached and whether they are actually on the brink of the decline or skidding fast.

AN EXAMINATION of some three hundred catalogues of colleges and universities for the past few years reveals how few are giving a course in Russian history—seventeen out of three hundred. The same catalogues reveal about six institutions still offering Sanskrit. The writers do not intend to disparage the latter, but they do say that there should be more value, interest, and emphasis in something which is of cultural value to all. At any rate, if we keep the old standardized courses of the French Revolution and of the Stuart period, why not accept the challenge of the present and add Russian history?

Questionnaires were submitted to the departments of schools offering Russian history. Not a single instructor who answered the inquiries had received or had heard of any criticism arising in the state about the fear of radical ideas.

Almost all instructors reported larger enrollments in classes in Russian history than in the standardized or specialized orthodox courses. In New York University often as many as three sections of it are taught. Professor Andre Lobanov-Rostovsky has 150 enrolled at the University of California at Los Angeles. The enrollment in Russian history is 95 at Ohio University, 33 at the University of Arkansas, 10 at the University of Pittsburgh (about the same as in a course in the French Revolution), 20 at Washington State College, 70 in Brown University and Pembroke College combined, and 40 at Vassar. There is no general course in Russian history offered at Yale, but Professor Vernadsky has 14 upperclass students (limited to that number and the list is filled every year) in a course on Eastern Europe which emphasizes Russia and her relationship to the Near East and the Far East. In the Yale Graduate School he offers alternate courses in Medieval Russia, Modern Russia, and the Russian Revolution. These schools represent all sections of the country and give some idea of the appeal and demand of the student body for such a course.

Textbooks are used in some instances, but special readings are assigned when the library facilities are adequate. The division of time allotted to the study varies, but the greater portion of the emphasis is placed upon the period from 1815 to 1917. About one-fourth to one-third of the semester is set aside for a discussion of Bolshevism in theory and in its practices. Thirteen out of the seventeen offer it every year. Five of them grant four hours of credit, eight for three hours, and four for two hours. Fourteen give it for one semester and three for two semesters.

The writers do not desire to appear as propagandists, but they sincerely believe that Russian history offers one of the most attractive possibilities to the teacher who desires to get out of the rut. It will be a challenge to him, and when he accepts it he will inspire eagerness among his students.

Fact and the Comprehensive Examination

By EDWARD S. JONES

Generalizations Reached through an Investigation of the Practices of Many Colleges

SINCE the rise of interest in examinations in this country —the discussion question, the new-type objective forms, and more recently the comprehensive terminal examination—many have argued the importance of facts. According to one group of examiners, definite factual items—those items which are accepted as true—must be the solid basis of examining. These examiners usually advocate a wide sampling of definite short-answer items. Another group, influenced more or less by the experiences of the English universities of Oxford and Cambridge, have vaguely sought something less tangible than facts in their examining, an ability which they feel is more important. It is partly the selection and expression of relevant ideas, partly the original organization of ideas, and partly a keen appreciation of the historic-philosophical reference of any important problem. To the second group of examiners facts make up the skeleton, perhaps, but not the meat of scholarship. They do not motivate the thinker. They do not require consecutive reasoning on a broad problem. To be sure, such thinking cannot fail to use and yield facts, but these are often by-products, supplementary to broad principles.

What is a fact? Derived from the Latin *factum*, a fact stands for a deed or past event. It is true that there are facts which are ultimately final events bound up with definitions or identities (such as "*two and two equals four*"), but there are also "facts," those items which are commonly accepted as fixed because they establish well-agreed-upon relationships within a system of postulates which is accepted. Medieval scholasticism had many identities and facts regarding the soul and God which could be derived provided one accepted the basic postulates and definitions.

Some philosophers refer to orders of fact-ness, differentiating facts according to their verity or complexity or both. The idealists will allow absolute certainty for no facts, as one's theory of knowledge or use of terms modifies the nature of the simplest perceptions; for example, some behaviorists do not grant the reality of consciousness.

It may be that the most significant characteristic of a fact, or item

treated as a fact from the point of view of examinations, is that it is *closed.* It points in one direction and needs no problem attitude or ingenuity for its resolution. When a laboratory experiment demonstrates that an object may be described adequately in terms of accepted elements, and there is no dispute, this is accepted as fact. Of course, the discovery of new elements in years to come may damage present facts. The medieval disputations about the soul were closed declamations, each statement to be memorized in an order. They were not in the nature of discussions of a free, open type. They therefore had the earmarks of factual content, just as definitely as an arrangement of chemical elements or anatomical data or author-book relationships are facts. The criterion of a factual answer is the correctness of the report or memorized sequence of ideas.

As generalizations are built up, laws, predictions, theories, and finally hypotheses, one runs further away from facts or closed systems of expression and enters a vast field of language and fact manipulation. Problems and new situations provide an opportunity for multiple pathways and diverse solutions, even in mathematics. Here the essay becomes dominant, at least in literature and social science. Assembling, selecting, and organizing data to prove one's point or indicate a relationship are the important criteria of ability.

Some facts, we may say, are essential elements in culture. That Shakespeare wrote *Hamlet* would be considered more essential for the college student to know than that Dante was the author of *Vita Nuova*, probably because the former is more often mentioned; it touches our general thinking more frequently. Some facts we must accept as much more potent than others in their significance in tying up many different associations. The completion of a critical experiment, the discovery of a lost manuscript, or the exhuming of a prehistoric skull may be facts of this sort. No one can question the desirability of examining for common or important facts.

AS FACTS get further removed from common knowledge, however, and are less and less important in interpreting our complex world, they lose pertinence in cultural examining. Mr. Brigham in his *A Study of Error* has given us many samples of items of information the possession of which has no relation to intelligence. Remembering the name and achievement of a minor poet or athlete, or a minor detail in a physical experiment; for example, the manufacturer of a thermometer, may actually indicate attention to unessentials and therefore be signs of inefficiency. An interesting illustration of a factual item which not one in ten able eastern adults can approximate with any degree of accuracy is "the number of horses in the United States." Typically, the estimate is nearer one million than the actual number of over twenty million.

In our examining it would seem desirable for us to avoid calling for those specific items or exact details which have no bearing on future

accomplishments and the desired objectives of a field of study. Most proper names can go, or do go; so do exact measurements, definitions, or minor specific organizations of knowledge. Within a week after the examination they have begun to vanish. But something remains. The residue of generalization and understanding usually serves as a valuable orientation in the field of study, furnishing a vocabulary of general concepts and some notion of trends of thinking. Stephen C. Pepper, in a brilliant essay on middle-sized facts,[1] calls attention to the vast number of in-between materials of our knowledge, not the specific detailed facts, his "little facts," nor the final large generalizations. These middle-sized facts make up the vague background of concepts, tools, ways of thinking in a field, which are the surest survivals of learning, and which save the philosopher from skepticism, on the one hand, and dogmatism, on the other.

The examiner sorely needs salvation as well. In our frequent attention to "spot passages" in literature, to details such as author-quotation memorization which the American textbook course encourages, we demand of the student meaningless verbalizations and chance incidental traces of information. To consider details as indubitable and ultimate goals is dogmatic; to discover that one's students cannot recall them or use them leads to skepticism of the transmission of any knowledge.

To be able to express oneself clearly in a field is a skill; it is the essential activity of the educated man. It is interesting that some of the greatest examining systems started out with their emphasis on overt activities or skills. The Chinese civilization had its systems of social relationships, and its religious rites; the Ottoman empire, its military performances; the Greeks, their orations. But as a system continues, and organization is perfected, the examining is made easier by veering from *act-examining* to *fact-examining*. Instead of a religious or military skill, instead of a capable discussion before the athenaeum, there is substituted a test for memorized question-answer associations. It is much easier to sit back and ask a student what he knows about a specific event, or to exact from him closed memorized statements than it is to find out what he can do in a general, unclosed sphere of activity. Acts take longer to examine, and they are harder to evaluate. Moreover, by fact-testing one can measure the erudite subservience of a student to his master, which pleases the master. In the flare of competition such fact-examining has always led into minute, unrelated, and usually unimportant details.

The struggle of British examining through the eighteenth and the nineteenth centuries was a struggle to supplant short memorized forms of knowledge, that is, fact types of questions derived largely from scholasticism, and substitute longer contributions, discussions in which the student could manage facts to suit himself. Managing a broad topic is a greater intellectual task than following a routine. Facts should be the

[1] *Studies in the Nature of Facts.* Berkeley, California: University of California Press, 1932. pp. 3–28.

instruments of proof or reasoning, not the goals of education. Laws and theories, with the evidence for them, become the ultimate bonds of knowledge. Theory not only serves to tie up many facts, but it may lead to the discovery of more facts; it also arranges facts according to their relative importance.

IN THE average American college examination the student has little opportunity for original thinking. He is asked to give either facts, closed and definite, or else short discussions, almost as closed, which are likely to be the summaries from textbooks. In classes of thirty or more students, a professor feels that he cannot afford more than a minute or two to a student for an oral report. To take a broad topic and deal with it diversely is not encouraged except in the seminar.

A serious difficulty in the new-type objective forms of questioning is that it is difficult to get items which are not rather narrow facts. They must be definite and agreed upon or they cannot be treated objectively. Debatable points and the capacity for organizing creative expression are outlawed.

Our returns from the alumni of twenty-seven colleges indicate a strong demand that more attention be given to training for, and examining in, broad essay types of topics.[2] One chemist reported that the most stimulating examination he had had in college was a three-hour test in which the instructor merely wrote the word "ice" on the board. Typically, students feel that they are not properly trained to handle such topics. It usually takes careful tutoring or small seminars to furnish an opportunity for practice. The experiences of more than fifty colleges which have already given some type of general comprehensive examination as a requirement for graduation points to a trend in this direction; that is, away from the closed item, whether it be a single concrete event or the generalization of a textbook, and toward the unpointed and unclosed general topic which the student is encouraged to handle as he may. This capacity for orderly exposition of new relationships is more nearly what these colleges consider is the mark of the educated man.

[2] *Comprehensive Examinations in American Colleges.* New York: Macmillan Company, 1933. Part II, Chap. IV.

A New Interpretation of the Functions of High-School Science

By ELLIOT R. DOWNING

Mastery in High School of a Few Principles of Science, the Best Preparation for College

COLLEGE teachers of science have been free to express opinions on the futility of high-school science as a groundwork for the ensuing college courses. In an article on "High School and College Chemistry," Glenn Wakeham, the author, says, "As far as formal learning is concerned, the high-school period could probably be dropped *in toto* without any serious effect upon the students' work in college."[1] Arthur L. Foley[2] presents data from eight Indiana colleges and normal schools showing that 392 students entering with one year of high-school physics receive an average mark in their first semester of college physics of 77.7 per cent while 119 with no high-school physics in the same college courses make 72.6 per cent. He thinks that "the difference in the grades is a fair argument in favor of dropping physics in the high school." He quotes similar opinions from teachers of physics in other schools from which the data were collected. One writes him: "So far as the knowledge of physics is concerned my students who have had high-school physics do no better work than those who have not had it." Anyone who is familiar with the literature dealing with the relation of high-school to college science is aware that such statements could be greatly multiplied.

Both college and high-school teachers are anxious to diagnose the difficulty and to remedy the situation if possible. Is it not entirely probable that the entrance examinations set by the colleges in the science subjects are largely responsible for the existing dissatisfaction? Such examinations, largely factual in character, cover the whole subject of physics, biology, and other sciences. They force the student to cram a mass of unorganized and incoherent information instead of demanding mastery of a few important principles.

Mr. Benjamin has shown that it takes two to three weeks for high-school pupils to understand and to gain facility in the application of one of the usual laws or principles of physics so he can successfully use it

[1] *School and Society*, XXXII (August 9, 1930), pp. 206–208.

[2] "The College Students' Knowledge of High School Physics," *School Science and Mathematics*, XXII, pp. 601–12.

to solve problems of the sort that arise in life.[3] The author has similarly shown that it takes three to six weeks to give a mastery of a principle or group of closely related principles of biology.[4]

Analysis of a dozen modern textbooks in physics shows that the authors attempt to present from 23 to 43 principles in one-quarter of the word space in the book, and a very large mass of factual material in the other three-quarters. Hackett's analysis similarly shows that there are 83 principles presented in ten textbooks of biology, an average in each book much greater than can possibly be mastered in one year. In addition, from half to three-quarters of the word space of the book is devoted to the presentation of factual material having no bearing on the principles.[5] It is evident that the textbooks are presenting much more material than can be thoroughly mastered. They are putting a premium on superficiality.

The country over 56 per cent of the young people of high-school age are in high school. In Chicago the figure stands slightly in excess of 80 per cent. In many communities it approaches 100 per cent and in not a few has reached that figure. High-school enrollment has multiplied twelvefold in a generation. We are rapidly approaching the time when the normal boy or girl will be expected to complete the high-school course, as a generation since he was expected to have a common school education.

A SMALL, though increasing percentage of these pupils go on to college. The science of the high school needs to be taught as preparation for life, as a consumer science rather than a producer science. If the public schools, both elementary and secondary, could concentrate on the mastery of those principles of science that are most often needed in the solution of the problems that arise in the life of Mr. Everyman, then he would be prepared for life in the field of science. Objective studies have determined with a fair degree of certainty these most necessary principles.

Now would not such a body of well-mastered material serve also as the best preparation for college? It would give a dependable foundation on which the college work could be based. College teachers of science at present feel that the high-school work in science is futile as a preparation for college work, largely because college-entrance examinations have forced the high schools to attempt the impossible.

The plea is here made then: first, that teachers of science in the public schools concentrate on the mastery of a relatively few of the most important principles needed by the consumer of science and of the simpler concepts needed as a basis of understanding, that much exercise be provided in the application of such

[3] "Time Required to Master Principles of Physics." An unpublished Master's thesis on file in the library of the University of Chicago.

[4] "Teaching Units in Biology," *North Central Association Quarterly*, V (March, 1931), pp. 453–67.

[5] Hackett, G. L. "A Comparative Analysis of High-School Textbooks in Biology." An unpublished Master's thesis on file in the library of the University of Chicago.

principles to problems of the sort that arise in life; and, second, that colleges change their entrance requirements so as to encourage such an outcome of public-school science teaching because it will provide a substantial foundation on which to base more extended instruction. [Vol. IV, No. 7]

The Dean of Women

By PHILIP L. HARRIMAN

The Duties and Qualifications of the Dean of Women in the New Social Order

IN MORE placid days the dean of women occupied an unquestioned status of authority. She was both a benevolently severe duenna and an *arbiter elegantiarum*. By unwritten law it was agreed that college girls ought to lead cloistered lives. The parents and the college officials were at one on this point. To their desires the girls were not inclined to raise strenuous objections, and they deferred to the judgment of the dean of women in all matters pertaining to their deportment. Hers was the duty of circumscribing the lives of her charges to the spheres ordained by the college president and the parents. Chaperoned to and from the college, the women students found little respite from supervision even while they relaxed from the rigors of the curriculum. Though here and there a rebel protested, the great majority obtained satisfying joy in the deviltry of a midnight fudge party or in the discovery that *Tom Jones*, though prescribed reading for English A, yet possessed intrinsic interest. To remark that such innocent excesses and respectful deference have passed is to state the obvious. With the change in the mores of young women students have come many problems bearing directly upon the status of the dean of women. No longer a sinecure for decayed gentility, her position has become one of the most difficult to fill successfully.

On the one hand, she contends with the hopes and fears of the parents, who insist that the college succeed where they have failed. If the daughter be allowed to smoke at home, still the parents hardly like to believe that cigarettes are tolerated at college. Even if the girl be somewhat pagan in the home town, yet the parents, alarmed by reports of college dances, frown upon the laxity of the college in tolerating un-Victorian pleasures. The dean of women is expected to enforce rigid standards which father and mother have found it expedient to refrain from uncompromisingly up-

holding in dealing with their daughter. On the other hand, the president, the trustees, and many of the instructors expect her to have the conduct of the college women conform to standards prevalent several decades ago. Hence, the situation is increasingly more difficult. Under the changing social order and the premium placed upon specialization, marriage must inevitably be deferred. Likewise, there is no insistent demand for large numbers of college-trained women to enter challenging fields of business or professional life. It is manifest that a Cyrenaic attitude toward life has developed and that young people need not be condemned for their libertarian standards. A close relationship doubtless exists between shifting moral codes and chaotic social and economic life. Furthermore, the growing democratization of higher education has brought many young women to seek its benefits in spite of their lack of serious life purposes. Yet the dean of women is expected to achieve the impossible task of enforcing a moral code suited to the more stable order of several decades ago.

A CHANGING social and economic order is developing a different type of dean of women. This new type possesses training which enables her to adapt herself to the bewildering changes and yet to conserve the finest of the older behavior patterns. No longer does a culture of manners suffice for one in her position. She has culture of intellect as well. As a tangible sign of academic respectability, she possesses the earned doctorate; otherwise she could not hope to attain to the respect of her colleagues on the faculty or of the students. Though no special magic attaches itself to the Ph.D. degree, she realizes that it means at least an investment of time, energy, patience, and money in preparation for educational work. She agrees that any other degree short of the doctorate is a confession of entrance into college administration through the cellar door. As a further evidence of scholarly attainment, the new type of dean of women has traveled abroad, and hence in the enviable brilliance of her conversation displays familiarity with the cultural and historic places of Europe.

Second, she has such knowledge of her own failings that she is unlike the Pharisees. In moments of righteous indignation she does not display a deplorable tendency to castigate the girls for doing that which she might secretly like to accomplish. Subjecting herself to shrewd psychoanalysis, she has kindly, understanding sympathy even with the most regrettable deviations from rectitude. Nevertheless, she is what James described as a "tough-minded" personality. No longer is there room for the sentimentalist or for the winsome, but futile, woman who fatigues the lachrymal glands rather than the cerebral cortex.

Finally, the dean of women is now actuated by a genuine desire to help intelligently in molding character. She has such knowledge of the theory of higher education, such training in vocational guidance, and such familiarity with the facts of life

beyond the campus that her counsels are sensible and practical. Unless qualified by holding the medical degree and subsequent training in psychiatry, she avoids dabbling amateurishly in diagnoses of mental abnormalities. Her task is to advise with authority on matters legitimately within her province. Her advice is sought and heeded on problems of choice of courses, social customs, and vocational fitness. In short, having unquestioned academic respectability, being austerely sympathetic, possessing knowledge whereby she may truly aid her charges, the new type of dean of women legitimately occupies a most important office in the college. At a time when everything is in flux, she exerts, in an intimate fashion, a stabilizing influence. With her tremendous responsibilities the faculty has all too slight a sympathy, a lack of appreciation born of preoccupation with instructional duties and not of unconcern.

High-School and College Records

By B. L. STRADLEY

The Records of Successful Contestants on Ohio General Scholarship Tests for High-School Seniors

GERMANY believes in her bright boys. After the World War was over, influential men of Germany set about to raise funds from private sources so that these boys might be sent on to the universities and professional schools and devote their entire time to school work rather than to have to think of material needs, clothing, food, shelter, books, and tuition. Is not Ohio able to do as much?

The Ohio State Department of Education for several years has tried to stimulate sustained scholastic endeavor during the high-school years through the selection of the Seniors of highest standing and by putting these students in contact with the colleges and universities of their choice, whether in or out of Ohio. The Department has set up the machinery whereby this can be done and has encouraged institutions to provide scholarships for those deserving students who are eligible and who desire to enter the institutions.

The General Scholarship Test for High School Seniors—an objective test covering the essentials of the high-school course of study—was devised as a means of measurement. The high-school course of study is divided in the test into the five following subject groups:

Mathematics	Arithmetic (⅓), algebra (⅓), plane geometry (⅓)
English	Fundamentals (½), American and English literature (½)
History	United States history (½), world history (¼), Ohio history (¼)
Science	Physics (¼), chemistry (¼), general science (¼), biology (¼)
Social science	The world today

The fraction in parentheses after each subject indicates the approximate portion of the entire set of questions of a subject group that is given to a particular subject. In mathematics, one-third of the test is devoted to arithmetic; one-third, to algebra; and one-third, to plane geometry. The parts of the test are bound in a single booklet, a copy of which is distributed to each student. Not more than three and a half hours are allowed for taking the test.

A committee of three is appointed in each county to have charge of the annual scholarship testing. The county superintendent of schools is chairman of the committee, and he is assisted by a city superintendent and an exempted-village superintendent

who are appointed by the state director of education. The duties of the committee are to disseminate to all high-school Seniors correct information concerning the General Scholarship Test, to stimulate a number of desirable Seniors in each high school to enter the test, to select the place where conditions will be conducive to good work, to make provision for caring for all contestants, and to administer the tests properly. The test booklets are sent to the county superintendent in a sealed package, which is broken in the presence of all members of the committee and the contestants, just before the hour scheduled for the test. The committee members are required to follow carefully all directions for giving the test, and to return all test booklets (used and unused) to the director of the test as soon as the test is over.

Not more than thirty-five per cent of the Seniors can represent the individual school and take the test. Each Senior whose scholarship, attitude, and behavior are satisfactory in the opinions of the high-school faculty members, and who will graduate at the end of the school year is eligible to take the test.

As evidence of unusual success in completing the General Scholarship Test, county awards, district awards, and state awards are given. The county award is a certificate given to each of the three contestants who have the highest ranking in the county. The highest twenty-five per cent of the county group receive certificates of honorable mention. The state is divided into five districts. The twenty-five students who make the highest scores in the district receive certificates of award, while the other contestants whose scores are in the highest ten per cent receive honorable mention. The state award is given to the twenty-five students who make the highest scores throughout the state, while honorable mention is given to the other students in the highest five per cent.

The tests were first given in the spring of 1930; since then their popularity has become practically state-wide. In March, 1932, they were given in 84 of the 88 counties. The state-wide contest has had an influence in creating a wholesome attitude toward scholastic endeavor. Hundreds of participating boys and girls have received scholarships in the colleges and universities of Ohio, as well as in colleges and universities outside the state. Any number of serious inquiries have come from other state departments of education and universities outside the state with respect to the nature of the test. Frequent expressions of faith and sincere belief in the idea have been received. A letter has recently come from Smith College with the information that one of the 1932 girls has been awarded a $500 scholarship for the year 1932–33.

EACH student indicates on his test blank his college or university preference. To enlist the co-operation of the colleges and universities in this scholarship contest two lists are sent to each institution. The first list includes the names of the students who expressed a preference for the addressed institution and

whose scores fell in the upper five per cent of the group taking the test. The state department urges each college to grant scholarships to as many of these students as it can. As a safeguard to the institution and as a means of throwing responsibility on the student who accepts a scholarship, the state department recommends that each scholarship shall be valid until its expiration if the student's scholastic record is high and if his behavior, attitudes, and ideals are satisfactory. If a student fails to meet his obligations, the college is not to be obligated to him.

The second list contains the names of each student who expressed a desire to enter the institution, regardless of his ranking on the test. Even in cases where the contestant does not receive a scholarship from the institution the officials of the institution have at hand, through the scores made on the test and the supplementary data gathered in connection with the contest, a body of valuable information about the student, which will be helpful to him and to the institution.

OHIO STATE UNIVERSITY has been interested in its students who have participated in the general-scholarship contest. Thirty of those whose scores were high among those of the contestants for 1930 and twenty of those for 1931 were granted scholarships for at least one year. In addition to these groups there have been on the campus a large number of contestants with lower rankings. The records of these students were obtained from the dean of each college.

Tables I and II are presented so that the reader might have some information concerning the quality of the scholastic work that has been maintained by these general-scholarship contestants for 1930–31. In Table I, the distribution of the point-hour ratios for the 1930 group has been presented according to the college in which these students enrolled. The point-hour ratios are based upon the total number of hours of credit received for the two-year period. The point-hour ratio was determined by taking the total number of points earned by a student and dividing by the number of hours of credit received.[1]

TABLE I

POINT-HOUR RATIO (SEPTEMBER, 1930, TO JUNE, 1932) OF THE GENERAL-SCHOLARSHIP CONTESTANTS WHO RECEIVED SCHOLARSHIPS AT OHIO STATE UNIVERSITY IN THE FALL OF 1930

Point-Hour Ratio	Agriculture	Arts and Science	Engineering	Total
(1)	(2)	(3)	(4)	(5)
3.75–3.99	.....	.....	2	2
3.50–3.74	.....	1	.....	1
3.25–3.49	1	4	2	7
3.00–3.24	.....	4	5	9
2.75–2.99	.....	1	2	3
2.50–2.74	.....	.....	.....	.....
2.25–2.49	.....	.....	3	3
2.00–2.24	.....	1	3	4
Number	1	11	17	29
Average point-hour ratio	3.4	3.2	3.0	3.1

The one student who enrolled in the College of Agriculture maintained

[1]The following points were given for each hour of work: *A*, 4; *B*, 3; *C*, 2; *D*, 1; *E*, 0. A pupil who had made 4 hours of *A*, 5 hours of *B*, 5 hours of *C*, and 1 hour of *D* would make 42 point-hours: 42÷15 (number of hours carried) = 2.8 point-hour ratio.

a point-hour ratio that fell between 3.3–3.5. One of the eleven students who enrolled in the College of Arts and Sciences maintained a point-hour ratio of between 3.5–3.74 for the two-year period. Four maintained a ratio between 3.3–3.5; four between 3.0–3.2; one between 2.8–2.9; and one between 2.0–2.2. The average point-hour ratio maintained by the eleven forty-two contestants who entered in the fall of 1931 is classified according to the deciles of the scores on the state-wide General Scholarship Test in which their individual scores fell. In the table *X* represents the highest tenth, *IX* the next highest tenth, and so on to *I* which represents the lowest tenth. The eleven students in the highest tenth maintained a point-hour

TABLE II

POINT-HOUR-RATIOS (SEPTEMBER, 1931, TO JUNE, 1932) OF THE GENERAL-SCHOLARSHIP CONTESTANTS WHO ENTERED OHIO STATE UNIVERSITY IN THE FALL OF 1931 ARRANGED BY THE DECILES IN WHICH THEIR SCORES ON THE TEST FELL

Point-Hour Ratio	Scores Arranged According to Deciles of the State-Wide General Scholarship Test										Percentage of Whole Group
	X	IX	VIII	VII	VI	V	IV	III	II	I	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
3.75–3.99	2	.....	1	.....	.....	.....	.....	.....	.....	.....	2
3.50–3.74	1	3	2	1	.....	.....	.....	.....	.....	.....	5
3.25–3.49	1	2	2	.....	4	.....	1	.....	.....	.....	7
3.00–3.24	2	8	5	1	.....	1	1	.....	.....	.....	12
2.75–2.99	2	4	4	4	1	2	2	.....	.....	.....	13
2.50–2.74	1	4	5	3	3	4	1	.....	.....	.....	14
2.25–2.49	.....	2	2	2	1	1	2	2	2	.....	9
2.00–2.24	2	4	3	4	1	3	4	1	2	2	17
1.75–1.99	.....	.....	2	.....	.....	2	3	1	1	.....	6
1.50–1.74	.....	2	.....	1	1	2	2	.....	.....	.....	5
1.25–1.49	.....	.....	.....	.....	.....	2	.....	1	.....	3	4
1.00–1.24	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Number	11	29	26	16	11	17	17	5	5	5	100
Average point-hour ratio	3.1	2.8	2.8	2.5	2.8	2.2	2.2	2.1	2.2	1.6	.....

students for the two-year period is 3.2. There were seventeen students enrolled in the College of Engineering. Two maintained an average of between 3.8–4.0. This is nearly a perfect record. All the students maintained an average of 3.0 in the College of Engineering. This is practically a straight *B*.

In Table II, the distribution of the point-hour ratios of the one hundred average of 3.1 for the first year in the University. Each student attended Ohio State University at least three quarters. Those who were placed in the ninth tenth (*IX*) maintained a point-hour ratio of 2.9; those who were placed in the eighth tenth (*VIII*), a point-hour ratio of 2.8; those who were placed in the third tenth (*III*), a point-hour ratio of 2.1; and those who were placed in the first

or lowest tenth (*1*), an average of 1.6. The average point-hour ratio maintained by the one hundred forty-two students for the two-year period was 2.6. No student in the group made a point-hour ratio less than 1. More than 79 per cent of the group made an average of 2.0 or better, while 25 per cent of them made an average of 3.0 or better.

Comparative figures regarding the University Freshmen cannot now be secured, but mention of the point-hour ratios of representative groups will give a picture of how the academic record of the State Scholarship group compares with those of other groups on the campus. In a recent monograph, it was found that the average point-hour ratio of the class entering the University in the autumn of 1923 was 1.91, or slightly below the grade *C* which is equivalent to 2.0.[2] The social fraternities have raised their point-hour ratio from 2.01 to 2.30 in the past five years, which is slightly above the academic record of the social sororities for the past year which was 2.28. The point-hour ratios of the Freshmen in some of the colleges of the University may be interesting when compared with the average of the State Scholarship group. The College of Agriculture reports a freshmen median point-hour ratio of 2.3, and the College of Commerce and Administration reports median point-hour ratios of 2.12 in 1930 and 2.13 in 1931. The Freshmen in the College of Engineering last year earned an average point-hour ratio of 2.4. It is easily seen that the State Scholarship group, with a point-hour ratio of 2.6, has a higher academic average than any of the groups mentioned.

It is obvious that the boys and girls who have made high ranks in the state-wide Scholarship Contest have performed well in the University, but it would be unwise to attribute their success in the University to the Scholarship Contest. A study of the academic records of the Freshmen who have competed in the state-wide contest seems to indicate that the scores made on these tests are practical selective tools for measuring ability to do college work. It is possible, too, that this plan serves to stimulate scholastic endeavor and attainment during the high-school period. There is, however, insufficient data with which to verify this assumption and to measure the degree of improvement in scholastic grades. Anything that has a stimulating effect upon scholarship should be encouraged. The Scholarship Contest in itself is a worthy project, but there is some justified criticism concerning the preparation of the students for the examinations. In some schools, too much emphasis is placed upon the acquisition of factual information. This criticism was recognized by Mr. E. R. Wood, who was first in charge of these tests in Ohio, and his brother, Mr. Ray Wood, who is ably carrying on the work.

There is an increasing interest on the part of high-school boys and girls, as well as their parents, in the state-wide Scholarship Contest. School officials everywhere cannot do less than encourage this interest.

[2]Edgerton, Harold A., and Toops, Herbert A. *Academic Progress.* Columbus, Ohio: Ohio State University Press, 1929. p. 141.

· *With the* · Technicians ·

Students Predict Their Marks

Sixty per cent of students at Eastern Kentucky Teachers College foretold the marks they were to receive in their courses (771 students, 3,875 courses, and 10,970 semester-hours) the week before the end of the semester. There were several factors which contributed to this ability—the marks received on the other examinations during the term, the examiner's way of marking, the number of students enrolled in the class, and the like. Although the coefficient of correlation between predicted and actual marks was .65 for all courses, the coefficients for individual courses ranged from .25 for industrial arts to .86 for physics. The predictions of the Sophomores correlated best (.75) with the actual marks received, while the Freshmen were somewhat less successful (.60) than the Seniors (.64) or Juniors (.67). The predictions agreed best with final marks in courses of four or more hours. Fifty per cent of the students receiving *A*'s predicted their marks correctly, while 46 per cent under-predicted their marks one letter; that is, they predicted marks of *B*, while 71 per cent of the students who eventually received *B* or *C* predicted their own marks. Students enrolled in classes of from twenty to thirty appraised their ranks more accurately than students belonging to larger or smaller groups. This study is reported by Mr. H. L. Donovan and Mr. William C. Jones of Eastern Kentucky State College, in the July number of the *Peabody Journal of Education*.

The Transmutation of Marks[1]

A mark of 80 in one institution does not necessarily represent the same attainment as a mark of 80 in a second institution. The problem takes on more than academic importance in connection with the transfer of a student from one university to another and also in connection with comparisons of the college records of the graduates of high-school classes. The customary assumption is that two marks of the same numerical magnitude are equal if the distribution of marks is the same in the two institutions. As an acceptable abbreviation the means and standard deviations need be only approximately equal. Apparently, there is no standard practice when one or both of the means and standard deviations are unequal, which, of course, is most frequent. The requirement is often interpreted to mean that the marks are comparable if the range of the available marks is the same; that is, if "70 is a passing in both schools" and "marks of 100 may be given" even though they never are. Obviously, then, there may be a number of different approximations, any one of which will be an improvement

[1]Adapted from a report by Herbert A. Toops in the "Ohio College Association Bulletin," No. 88 (June 24, 1933).

over simply assuming that "80 is 80 no matter where found."

The simplest approximation which, at least roughly, will take into account the more important factors involved, will be the best practical device. The two most important reasons why marks are non-comparable, in the opinion of Mr. Toops, are that the distributions of marks are not identical, and that the intelligence distributions of the students may not be equal even if the former condition holds. Mr. Toops is inclined to believe that the quality of teaching is less important than the two already-mentioned variables, and therefore, relatively, negligible perhaps. His opinion is that the motivation of students, a factor only partly due to teachers, is important enough to warrant a place if there were an index to measure it for a school system. But since the addition of a single variable would complicate the problem tremendously, he attempts in the paper here summarized to make only the first crude corrections for inequality.

The formula which Mr. Toops derives he advocates as having "a great value for systematic transmutation of students' marks to comparable bases." The use of the formula requires the previous determination of the constant term and the regression coefficient of marks upon intelligence for the school whose marks are to be transmuted. Such systematic determinations may be made annually or biennially for the high schools and colleges within certain geographical areas. In Mr. Toops's opinion "valuable by-products of such work would be the encouragement of college-going of capable high-school Seniors not now aware of their chances for college success, and of the problem of 'standards' both in the secondary school and in the college. A still more remote end would be the general recognition of the fact that academic success is multiple—a profile rather than a single index, which admits or excludes depending as it is high or low respectively."

Close Agreement Found in Marking Essay Examinations[2]

One of the chief objections to the so-called "essay" examination is that the scoring of the responses of students lacks objectivity; that is, when two or more persons mark the same examination wide variations have been found in the relative ranks of the scores given. Some markers discount the paper for spelling errors, others for sentence structure, still others for quality of handwriting and general neatness; some count the number of facts it contains; and so on. Obviously, if an examination is given to measure the degree to which students can apply the facts and principles of a subject in solving problems, marking the examination on spelling, neatness, information, or on other objectives destroys the validity of the examination.

Nevertheless, "essay" examinations are often necessary as valid evidence of the achievement of students in some objectives of teaching. For example, to obtain valid evidence of the achievement of students in apply-

[2]Reported by Fred P. Frutchey, Bureau of Educational Research, Ohio State University.

ing chemical principles to situations new to the students, they are asked to write in their own words a prediction of the outcome of the problem situation and an explanation of the prediction in terms of the principles of chemistry. The usual procedure followed in marking "essay" examinations has been to ask individuals to read and mark the examinations without emphasizing the objective to be considered in the grading. Hence, individuals have marked on different objectives, and each has weighted these objectives in his own way, producing wide variations in the results.

Close agreement has been found in marking "essay" examinations by making clear to the markers the objective on which to rank the examination papers. As a result of grading "essay" examinations testing the ability to apply chemical principles, the relationship between the scores assigned by five graders ranged from .85 to .95 with an average coefficient of correlation of .90. This indicates that examinations which are marked high by one are also marked high by the other markers, and examinations which are marked low by one are marked low by the others. Horney found similar results when he asked individuals to score "essay" examinations on one objective and to disregard others.

Although "essay" examinations often give direct evidence of the achievement of students, they require more time to administer and score and are likely to be unreliable because of the small number of situations which can be presented to students in the usual time allotted to examinations. An indirect or short-cut examination, in which the students can select and check the responses which they think correct, does not have the disadvantages of the "essay" examination and is more useful, providing it is valid. The validity of the indirect examination can be checked by comparing the relative achievement of the students on the indirect examination with the relative achievement of the students on the direct examination. Hence, it is desirable that the markers agree closely in grading the "essay" examination.

Not only do students who took high-school chemistry possess a definite residue of knowledge when they enter college, but this residue should also be acknowledged by allowing these students advanced credit. In the opinion of Paul Maurice Glasoe, of St. Olaf College, these students should be the members of advanced sections in which the chemistry they have had will serve as a foundation, and they should not be required to repeat the material already covered. Mr. Glasoe compared the records of a group of students who had studied chemistry in high school with a group composed of students of similar ability and general scholarship, and—each group had just completed first-year chemistry—he concludes that the definitely and consistently "higher achievement of the students who had studied chemistry in high school is a measure of the influence of the earlier course upon collegiate chemistry." This study, "Residue of High-School Knowledge Utilizable in College Chem-

istry" is reported in the September number of the *Journal of Chemical Education*.

Bridging the Chasm between High School and College

The maze of college-entrance requirements now in use "demonstrates the fact that either there are no admittedly superior standards of admission or the superiority of certain ones has been accepted on the basis of studies of isolated cases" is the conclusion of the National Survey of Secondary Education expressed in the monograph, *Articulation of High School and College*, just published by the Government Printing Office, Washington, D. C. Thirty-six different kinds of admission requirements are reported by 517 institutions of higher education. It was found that 25 methods of admission are used singly for regular and special students, while 11 other methods are used in various combinations.

Twenty-three per cent of the 517 institutions report that regular students may gain admission by means of the high-school diploma. This method is most frequent in the Southern region and among teachers' colleges and normal schools. Sixty-three per cent admit regular students on the basis of the transcript of high-school credits. The West takes the lead in using this method where 80 per cent of the institutions resort to it, while only 20 per cent use it in New England.

Twenty-six per cent of all institutions allow regular students to qualify for entrance by passing the college-board examinations with satisfactory marks. This practice is most prominent among the larger schools, in the New England region, and among the public colleges and universities. An equal percentage of the institutions minister their own entrance examinations. This practice is most prevalent in the southern region among the public colleges and universities, and among schools having enrollments of from two thousand to thirty-five hundred, but there is a tendency for institutions to abandon this practice.

Nine per cent of the institutions will accept records on examinations other than those given by the College Entrance Board or by the institutions themselves. This practice is most common among the larger institutions, among which the New York regents' examinations and examinations arranged by state departments of education are those most frequently acknowledged. The high-school subject certificate is used as a single method of admission for regular students noticeably among the larger institutions in New England and among private colleges and universities. Twelve per cent of the institutions use rank in the high-school graduating class as a method of admission, while the intelligence test, the principal's recommendation, personal interviews, and age requirement, as the only methods of admitting students, are rarely used. Other entrance requirements mentioned but rarely used alone are: college aptitude test, character rating, recommended units, health certificate, evidence of ability to pursue college work, permis-

sion of the president or other official, business experience, specific requirements, honorable dismissal from previous school, college work requirements, teacher's certificate or teaching experience, and four years' residence.

Only four combinations of entrance requirements appear often enough to be mentioned. The leading one includes the high-school diploma and the transcript of high-school credits. This combination is used by less than two dozen of the 517 institutions reporting it as the one used most frequently. The next combination in order of frequency, used by 15 institutions, comprises the transcript of high-school credits and the principal's recommendation. A dozen institutions report two other combinations: the transcript of high-school credits and the College Entrance Board examinations as one, and the transcript and examination device as administered by the school as the other. Special combinations are used for the admission of special students.

There is considerable variation among the subject requirements for admission of various institutions. The five subjects most often prescribed are English, mathematics, social studies, natural science, and foreign language. More than twice as many increases as decreases in the number of units required in English have been made since 1899. About twice as many increases as decreases have been made since 1899 in the number of units of mathematics required for entrance to college. As to social studies, in spite of a general increase since 1899, three groups report slight decreases since the same date.

The multitude of admission methods and combinations of entrance criteria used by the institutions included in this study reveals in an impressive way the fact that there are no recognized standards in the field of admission requirements. "The actual reliability of individual criteria, or various combinations of criteria, and of no criteria at all," in the opinion of the author, Mr. Brammell, needs "to be determined. It needs to be demonstrated whether or not traditional entrance standards are worth the trouble they entail."

·The·Reporter·

THE boards of trustees of the University of Chicago and Northwestern University have appointed a joint committee to consider the consolidation of educational facilities of the two universities. The plan is to effect an informal union with an interchange of facilities and the prevention of overlapping in the future development of the activities of both institutions. Both Presidents Hutchins and Scott have made statements to the effect that such co-operation would create opportunity for the most effective use of resources.

THE extension division of the University of Wisconsin is offering regular moving-picture shows in small towns otherwise inadequately supplied. The pictures are selected on the basis of educational as well as entertainment qualities.

IN September, Bucknell University opened its new junior college at Wilkes-Barre with a faculty comprising two administrative officers, five resident teachers, and nineteen commuting professors.

AFTER an experimental period of four years which were concentrated on supplying liberal-arts training to a limited group of students, Yeshiva College, New York City, has opened its doors to students in general fields who wish to combine their college work with the pursuit of higher Jewish and Semetic learning. It is the first purely Jewish college of liberal arts in the country.

APPLICATION has been filed with the New Haven Building Department by Yale University for the construction of Berkeley College which will consist of six buildings: four dormitories, a residence, and an administration building.

LATE in May the American Association of University Professors urged that universities grant emergency fellowships and part-time teaching positions to the many thousands of recently graduated Doctors of Philosophy and college graduates who are faced with unemployment.

AT the annual meeting of the American Council on Education an amendment was passed by which elementary, secondary, and high schools, as well as institutions of higher learning, would be included in the range of interest and activity of the Council.

A REGULATION, which has been in existence since 1899, limiting women students at Stanford University to five hundred, has been removed. Because of the reduced income of the University the numerical restriction has been waived, and the number of

women students may now grow proportionately with that of the men. Provision is made, however, that it shall never equal the men's total—at present, about three thousand.

THE final unit of the new University of Michigan Law School quadrangle, Hutchins Hall, was completed and opened this fall. The Law Quadrangle contains the Lawyers Club, dining hall and dormitories, the Legal Research Library, and Hutchins Hall which houses the teaching activities of the School. It was built from the bequest of $8,700,000 of William W. Cook to the Law School.

PENNSYLVANIA STATE COLLEGE announces that the freshman class has been increased to fourteen hundred students this year. With its enlarged laboratory facilities, it will be possible to accommodate two hundred more Freshmen than in former years.

THE National Occupational Conference, 522 Fifth Avenue, New York City, will furnish information to school and college administrators who are interested in helping students to choose their careers more wisely, and who wish data which will assist them in planning programs of vocational guidance. Such material may be obtained without charge.

AN ATTEMPT will be made this year at the University of Missouri to maintain a closer personal contact between the dean of men and all freshmen students by having each new University man voluntarily arrange at his convenience to visit the dean of men. Particular attention will be given to students who are working outside school in an effort to lighten their schedules if the students themselves have set up difficult schedules.

PRESIDENT ROBERT M. HUTCHINS, of the University of Chicago, in conference with others presented a plan to send college boys back to school through Federal relief funds. The campaign was started during the summer in order that there would not be so many youths to contest with married men for jobs.

THE New York office of the International Student Service of Geneva announces an orientation course to be held late in October for young American students who will spend the winter in France. It will offer informative addresses given, for the most part, in English, on aspects of French civilization, the structure of the French educational system, curriculums in France, and on the various organizations helping foreign students.

A NEW dormitory for men, the Tower Club, was opened at Ohio State University this fall. The new unit is set up in one tower of the University stadium and accommodates seventy-five dormitory residents selected on the basis of scholarship, character, and financial need. Room is provided at $1.00 a quarter and board at approximately $2.50 a week. The residents have their own officers and

three graduate students have been named as preceptors to encourage good scholarship.

THE secretary of the American Council of the Institute of Pacific Relations, Edward C. Carter, speaking in July before the National Education Association, stated that out of 3,473 fellowships for graduate study abroad during the last ten years only 30, or less than one per cent, were awarded for study in the Far East.

FOLLOWING up two successful terms of the Ohio State University Emergency School for unemployed Ohioans, the faculty committee has authorized a third term for the fall which will last seven weeks. Attendance during the summer session of the school was even better than during the first, the spring, session.

NEW colleges which opened this fall include Black Mountain College in North Carolina, under the auspices of the group of professors who recently resigned from Rollins College. Also, the new Suffolk Collegiate Institute at Bay Shore, Long Island, is offering junior-college work in engineering, chemistry, and liberal and fine arts.

IN PLACE of granting scholarships and fellowships for the current year, the State University of Iowa is giving free tuition to a selected number of graduate students who would qualify for scholarships, and free tuition and room to those who would qualify for fellowships. A graduate dormitory unit has also been set up to accommodate one hundred students. Students holding such honor appointments and assistantships are eligible to live in the new housing unit.

FOR the first time since the war, statistics from German institutions of higher learning indicate a decline in attendance in the last few years. The decline from the summer of 1931 to the summer of 1932 amounted to 13.8 per cent. Figures are as follows:

	Summer of 1928	Summer of 1932
Total matriculations	21,525	18,767
New male students	17,969	15,259
New female students	3,559	3,508

A SMALL but intensive investigation at the University of Michigan made by Mr. R. C. Angell indicates that the undergraduate of 1933 is more serious and possesses more mature standards of value than the undergraduate of 1929. The investigator attributes this change to the influence of the depression. Conclusions were drawn from carefully considered opinions of senior students, professors, dormitory heads, and University officials regarding student attitudes and interests, and from facts regarding costless student activities, such as reading of library books, use of athletic facilities, and attendance at University lectures.

A PROJECT attempting to carry on community life with an educational objective is being undertaken by New College, the new unit of Teachers College, Columbia University. Students and instructors will jointly run

a farm in the Blue Ridge Mountains of North Carolina, and each student is expected to spend at least one summer at the farm unless he has had an equivalent experience. Students and instructors will rotate on the work projects so that each individual may have experience in as many kinds of work as possible which will include planting, cultivating, and harvesting the garden and field crops, care of the buildings, and other farm activities.

DURING May the Illinois State Senate passed a bill which orders action taken against any educational institution for teaching "sedition or armed revolt." It has been pointed out in several journals that the terms "sedition" and "armed revolt" are exceedingly vague and are capable of the broadest type of reactionary interpretation. Under this bill it is proposed that state funds are to be withdrawn from guilty institutions and that the private property of privately supported institutions is to be taxed just as if they were ordinary commercial enterprises.

THIS year, 1933, marks the hundredth anniversary of higher education for women in the United States. Oberlin College was established one hundred years ago and is the oldest coeducational college in the United States, although during its first four years it was coeducational only in the preparatory department. Coeducation as an experiment proved successful, and, in 1852, Horace Mann applied the policy in the founding of Antioch College. State universities soon followed suit. Coeducation at Oberlin even antedated the first colleges established exclusively for women.

A bulletin of the United States Office of Education gives some idea of what was expected of the young girl who went to college one hundred years ago from the Oberlin catalogue for 1835:

> Young ladies of good minds, unblemished morals and respectable attainments are received into this department and placed under the superintendence of a judicious lady whose duty it is to correct their habits and mold the female character. They board at the public table and perform the labor of the steward's department, together with the washing, ironing and much of the sewing for the students. They attend recitations with young gentlemen in all the departments. Their rooms are entirely separate from those of the other sex, and no calls or visits in their respective apartments are at all permitted.

All students were required to work three hours daily, the men receiving 5 cents per hour and the women 3 cents per hour for their work. Board was $1.00 per week for the men and 75 cents per week for the women.

THE board of trustees of Johns Hopkins University, last May, after considerable discussion on the part of the members of the Advisory Boards of the various schools of the University, passed a resolution concerning the attitude of the University toward patents. The resolution was passed upon the recommendations of the School of Medicine, the School of Hygiene and Public Health, the

School of Engineering, and the Faculty of Philosophy. It read as follows:

The University should in no case own or control patents covering inventions or discoveries made in its laboratories or by members of its staff, and that it is undesirable that patents should be assigned to an agency controlled by the University or in the public mind directly associated with the University.

AT THE New York University School of Education conference courses on economies in school administration in July, Peter Grimm, chairman of the Citizens Budget Commission, attacked free colleges as being harmful and wasted upon many of our youths. He stated that the average student graduated without honors, probably derived no benefit from college, and deterred the advancement of real students. An "ideal municipal college" as outlined by Mr. Grimm was as follows:

Charge fees to residents of the city amounting to at least one-half the actual cost of educating them. Then open the doors of the colleges to non-residents at a fee equalling the full cost. Establish a considerable number of free scholarships in order that the most intelligent of the high-school students may not be deprived of college education by reason of poverty.

A NEW school of research will function this year within the graduate school of the University of Southern California. As members of the new school, candidates for the degree of Doctor of Philosophy are selected whose studies fall within the following departments: anthropology and archaeology, botany, chemistry, comparative literature, economics, English, educational science, French history, medical science, philosophy, psychology, sociology, and zoölogy. Other fields may be added later. By vote of the council on graduate study and research, members may also include visiting scholars, scientists, and "fellows by courtesy." The latter group will consist of individuals already holding the Ph.D., and will afford free use of library facilities, unrestricted auditing privileges, and will release the appointee from all tuition charges. Such appointments are made by President von KleinSmid.

STUDENTS attending state higher educational institutions of Oregon may do so this year with greatly reduced budgets. The State Board of Higher Education announced that the registration fee for the college and university has been lowered $6 a term, or $18 a year. Normal-school fees have been reduced $3 a term.

In addition to the reduction in fees, student living costs have been lowered so that at present the dormitory board and room charges at the college and university are $90 a year lower than they were a year ago, and $60 lower this year at the Oregon Normal School. Contrasted to approximately $100 a term formerly, present charges for board and room at the college and university amount to about $70 a term. At the normal school, board and room per term at the dormitories is about $66 a term as compared to $84.50 last year.

College and university total student expenses for the present are

placed at about $170 for one term and $460 for a year, which is a reduction of about $100 for the school year. Normal-school costs are figured at about $45 less this year, the estimate being $98.50 for the first term and $285 for the year.

UNDER the auspices of the New School for Social Research, New York City, Mr. Alvin Johnson, director, has announced the opening of the "University in Exile." The faculty consists of German professors driven from their country by the anti-Jewish and anti-liberal stand of the Nazi government. The school opened October 1, and courses are being offered in the Graduate School of Political and Social Sciences.

The new institution is not a charity, but rather contributions have been subscribed to the amount of $60,000. The enterprise is essentially an educational one and will operate on a non-profit basis. The professors will continue their teaching and research much along the same lines which they followed in the German universities.

A STATE grant up to $30,000 for one year was voted to pay instruction fees for unemployed Wisconsin citizens who can profit from and who have suitable qualifications for university extension courses. The University of Wisconsin will offer extension courses in vocational subjects, English, other languages, and literature, history, economics, sociology, and business. Those eligible for the extension courses with the exemption of fees include persons doing only odd jobs or working less than half-time, or those with sufficient funds only for minimum food, clothing, and shelter. Persons under twenty-one years of age may receive free tuition only if the parents or guardians are unable to pay the prescribed fees.

THE University of Michigan has balanced its budget for the fiscal year 1933–34, resulting in a reduction of approximately $900,000 from last year. Regular tuition has been put on a semester instead of a yearly basis, but has not been increased. General curtailment of activities and cuts ranging from 8½ to 20 per cent on all salaries over $1,500 have been announced.

Four points were taken into consideration in making reductions. First, the upkeep of buildings and grounds was reduced to a minimum for safety of operation. Second, all executive offices, student-personnel activities, and general offices and accounts were consolidated to a point at which further cut would result in complete loss of activity. Third, independent units of the institution were required to readjust their staffs and offerings as completely as possible. Fourth, salary reductions were planned to balance the budget after all other savings had been made.

LATE in the spring Dean Herbert E. Hawkes, of Columbia College, announced that the College had passed legislation permitting the Committee on Instruction to waive, in individual cases, one or more of the prescribed courses for the undergraduate degree when such modification would pro-

mote the best educational interests of the institution. Dean Hawkes commented on this as follows:

The discretion given to the committee by no means implies that any student who does not care to fulfill a given requirement for the degrees may automatically be excused from it. There are, however, a considerable number of individuals who are caught in the academic machinery and who are more harmed than helped by a strict adherence to the requirements for the degree.

For example, many men who have looked forward to medicine, to the four-year course in engineering, to the School of Journalism or the School of Business, may change their minds for good cause, comparatively late in their college careers. In such cases it is not unusual that a strict adherence to the regular requirements costs a student a year of his life without giving him corresponding value in educational opportunity or achievement.

It sometimes happens that after a student has made strenuous and faithful efforts to pass certain prescribed courses it turns out that his mind does not and cannot be made to run in that direction. If a student with a demonstrated blind spot for one particular subject shows more than usual capacity in other fields, there is reason to take such a case under consideration.

It will undoubtedly require some time to hit upon the fairest and most useful methods of procedure.

THE REGENTS of the University of California late in August agreed to establish graduate work, in a limited degree, this autumn at the University of California at Los Angeles, and despite a decreased budget, $75,000 has been set aside for the purpose.

Eventually work will be expanded in all departments, but for the present it will be limited strictly by the funds available for University purposes and will be in conformance with the following statement made by President Sproul to the regents:

Certain graduate work, such as that leading to secondary credential, could now be undertaken with practically no immediate additions to the staff, curricula, or expenditures, and a limited amount of graduate work, including the training of teaching assistants, might be established with an actual reduction in the budget, because such graduate students would replace higher paid associates and assistants.

· Editorial · Comments ·

The Ages of University Presidents

TWO of the nation's great universities open this fall with new presidents. James Bryant Conant, forty-year-old chemist, succeeds A. Lawrence Lowell at Harvard, and Harold Willis Dodds, forty-four-year-old political scientist, takes the place of the late John Greer Hibben at Princeton.

After the appointment four years ago of Robert Maynard Hutchins to the presidency of the University of Chicago at the near-adolescent age of thirty, there should be nothing startling about the election of such comparatively young men to the headships of Harvard and Princeton. But even though they are considerably older than Hutchins at the time of his appointment, their elevation has created some stir in the press, and one can imagine that the oldsters at their institutions are nursing their misgivings. Dodds comes to the Princeton presidency younger than all but one of his predecessors, and but two presidents in the 297 years of Harvard history have been younger than Conant: Dunster, the first president had just turned thirty when he became the first American college president, and Eliot began his long and eminent administration at the age of thirty-five.

But instead of being a liability the comparative youth of Presidents Conant and Dodds seems likely to be a boon and a blessing both to themselves and their universities. When one reviews the history of higher education one is struck by the ages at which outstanding presidents have taken office. Angell became president of the University of Vermont at thirty-seven and president of the University of Michigan at forty-two; Gilman took hold of the young University of California at forty-one and the new Johns Hopkins at forty-four; Harper had hardly turned thirty when he began to raid the best universities of the country for his Chicago faculty; White was thirty-three when he and Senator Cornell conceived the idea of Cornell University; Alice Freeman Palmer had attained the age of twenty-six when she took the reins at Wellesley; Miss M. Carey Thomas became the second president of Bryn Mawr at thirty-seven; William Oxley Thompson undertook the first of his three presidencies at the age of thirty; Wayland began his extraordinary career at Brown at thirty-one; and Union's famed Eliphalet Nott started his sixty-two-year administration at the same age. Among living heads of outstanding universities, Butler became president of Columbia at forty-two, Glenn Frank, of Wisconsin, and Hopkins, of Dartmouth, at thirty-eight, and Chase, of North Carolina, at thirty-six.

One might point, on the other hand, to illustrious presidents who took office at fifty or over such as Nor-

thrup, of Minnesota, at fifty, Barnard, of Columbia, at fifty-five, McCosh, of Princeton, at fifty-seven, Kinley, of Illinois, at fifty-nine, and Porter, of Yale, at sixty. By and large, however, the great steersmen in higher education have been men who attained to presidential status in their early forties or before. President Hyde, of Bowdoin, even went so far as to assert that "I have seen ninety-five percent of all administrative reforms advocated and accomplished by men under thirty-five." He went further and observed:

> I could point to a period of twenty years in the history of Bowdoin College when it was exclusively in the control of old men. During that period hardly a dollar was added to its funds; not a county was added to its constituency; not a new subject was introduced; not a method was changed; not a single improvement made. . . . Men who start young in a calling never grow old. But a man who starts old never grows young.

Dr. Vincent, at the inauguration of President Hutchins in 1929, remarked that the ability to be a great college or university president depends more upon endocrinology than chronology. With most men, however, endocrinology and chronology produce an almost perfect correlation, and trustees must determine, when a presidency becomes vacant, whether their institution at that period needs the energy and inventiveness of early maturity or the steadier but less resourceful guidance of the fifties and sixties. Bacon in his essay "Of Youth and Age" observed that "Men of age object too much, consult too long, adventure too little, repent too soon, and seldom drive business home to the full period, but content themselves with a mediocrity of success," and that "young men are fitter to invent than to judge; fitter for execution than for counsel; and fitter for new projects than for settled business."

Whether Bacon was in general right or wrong the Editors of the JOURNAL wish for Mr. Conant an administration as spectacularly successful as that of Charles W. Eliot, his only predecessor who was also a scientist; and for Mr. Dodds an incumbency as fruitful for Princeton as that of the redoubtable McCosh.

The Cuban Students

IN THE daily press during the past several years, and especially during the past six weeks, considerable space has been given to the political activities of Cuban students. Much credit for the overthrow of the Machado régime goes to them, and most of the initiative for the toppling of the short-lived Cespedes government is theirs. At this writing the members of the Students Directorate are dictating the policies of President Grau San Martin, and the *New York Times* reports that because of their opposition to American interests Ambassador Welles is attempting to placate them.

The students of Havana University have from the beginning been the spearhead of the Machado opposition. In 1923 they agitated to take the University out of politics and forced President Zayas to appoint a University assembly made up of pro-

fessors, alumni, and students. This assembly directed the affairs of the institution until 1926 when Machado abolished it, discharged the rector, and appointed a political henchman as head of the institution.

The resulting upheaval among the students reached a climax in October, 1927, when they tore down a banner bearing the president's name. Expulsions followed, and many were sent into exile. But the agitation against Machado continued so violently that in 1930 he closed the University entirely. Despite this apparent deathblow to their organization, the students kept up their fight until Machado's hasty departure from the island in August. Since then they have practically ruled Cuba through their representative directorate of thirty members.

The only adequate and authoritative description of the Students Directorate that has yet reached this country is that of Russell B. Porter's which appeared in the *New York Times* of September 15. Mr. Porter attended a meeting of the junta and described it in part as follows:

> The age of the youngest was 19. The oldest was 30. Two were young women. All were former students at the University of Havana, whose principal schooling has been in terroristic methods since the university was closed in 1930 because of anti-Machado agitation. Most of the members had been imprisoned, some for several years, and some wore the sullen, suspicious hang-dog look that prison life breeds.
>
> This revolutionary junta, which dictates the policies of the Grau San Martin government and so far has kept control of the army, meets daily for hours at a time—almost in permanent session—deciding the policies of the government of 4,000,000 Cubans and attempting to settle the vast economic and social issues and conduct international relations.
>
> The junta members all have equal authority. There is no chief or permanent chairman. A new chairman is selected at each meeting. The only permanent post is the secretaryship, which is merely a recording function, not an executive one, like that of Joseph Stalin.
>
> The members of the directorate are elected by the students of all the schools of the University of Havana. They assert that they represent virtually all 4,000 of the young men and women who were attending the university when it was closed by Machado. They also claim the support of councils representing students in the schools of each province, plus some university alumni and some professors.
>
> President Grau San Martin, whose selection for the Presidency of Cuba the directorate dictated, and several members of his Cabinet, all of whom the directorate selected and who carry out its decisions, belong to the professorial advisory group or "Cuban brain trust."

The student leaders described their political philosophy to Mr. Porter as a left dictatorship but not communistic. They also oppose fascism and observe that their movement compares closely with the new revolutionary republic of Spain. Their chief objectives are the following: First, to wipe out all remaining vestiges of the Machado régime, including corrupt pro-Machado army officers, politicians, and University professors; second, to reform the electoral laws, making it impossible for the rise of another Machado by the drafting of a new constitution that will derive

from Latin rather than Anglo-Saxon sources; third, to reorganize the financial and economic structure of the country, including revision of Cuba's foreign debt and the reformation of the taxation system; fourth, to reorganize the currency mechanism, attempting to remove Cuba from monetary and financial dependence upon the United States; fifth, to break up the huge sugar estates largely owned by American stock companies, and thus to bring about social and agrarian reforms by means of creating a middle class of prosperous farmers—in this connection the directorate is giving thought to the nationalization of the sugar and mining industries; sixth, to provide for the autonomy of the University of Havana and for the development of supplementary schools to reduce the high rate of illiteracy; and seventh, to abrogate the Platt Amendment and the revision of the reciprocity treaty.

Whether or not the student junta will have success in its program time only will tell. The older group of Cuban politicians are of the opinion that they will fail miserably and that they will not only destroy themselves but seriously retard Cuba's recovery. In the judgment of older business men as well as politicians, they are refusing to listen to sensible advice and are muddling the situation irremediably.

These critics of the students may be right. That remains to be seen. In any event, it is stimulating and reassuring to discover students who have taken their politics so seriously that they have overthrown a government and are idealistically attempting to set up another. Never has anything comparable to the Cuban student uprising occurred in the United States. American students are notoriously phlegmatic, largely perhaps because of the comparative stability of our politics and the difference between American and Latin temperaments. It would be greatly to be desired, however, that American students should concern themselves with the problems of their own campuses.

Here and there in recent years we have had groups of students protesting against compulsory military drill, and a decade ago a handful of undergraduates in various colleges and universities were clamoring for various educational reforms. In general, however, American students have been woefully disinterested in the implications of their lives as students and in their responsibilities as citizens. Perhaps the example of their Cuban compeers may urge some of them into action. If it should, they will make a difficult time for administrators and faculties, but by and large the results would more than likely be salutary.

W.H.C.

··Reviews··

University of Chicago Survey

TRENDS IN UNIVERSITY GROWTH, *by Floyd W. Reeves, Ernest C. Miller, and John Dale Russell.* Chicago: University of Chicago Press, 1933. xxvi+242 pp. (University of Chicago Survey, Vol. I) $2.50.

It is important for an educational institution to have available such information about itself as this volume contains about the University of Chicago. Too often information needed by a college or university in the course of its regular administration is too meager to serve the purpose. For example, the junior college in the University of Chicago enrolled nearly 42 per cent of the total student body of that institution during the Autumn Quarter of 1918–19, while the graduate school had just over 11 per cent. During the Summer Quarter of the same year the junior college had less than 6 per cent of the students, and the graduate school 37 per cent. Furthermore, the percentage of junior-college students in the Summer Quarter decreased from 5.9 per cent in 1918–19 to 4.1 per cent in 1930–31, while the percentage of students in the graduate school increased in the same period from 37.1 per cent to 50 per cent. Such data should have an important bearing upon employment of faculty members, library arrangements, laboratory assistants, and the like. In short, the University of Chicago is a different institution during the summer from what it is during the autumn. This is but a single illustration drawn from the 64 tables and 49 illustrations found in this volume.

Detailed information is given with respect to enrollments, student majors (credits) of registration, degrees, faculty, courses and classes, physical plant, and finances. Trends are shown with respect to most of the items studied, selected years before 1918–19 and each year after 1918–19 being used.

The volume will surely prove indispensable to the University of Chicago, but it will also be useful to other institutions. In it are shown methods of portraying facts about an institution which may serve as a guide to other institutions studying their own data.

FRED J. KELLY
United States Office of Education

THE ORGANIZATION AND ADMINISTRATION OF THE UNIVERSITY, *by Floyd W. Reeves, Frederick J. Kelly, John Dale Russell, and George A. Works.* Chicago: University of Chicago Press, 1933. xv+151 pp. (University of Chicago Survey, Vol. II) $2.00.

This book is a report by a faculty committee on the organization of the University of Chicago. While primarily, and in several respects only, of interest to the staff and friends of the institution studied, there are conclusions and suggestions which may well be considered by those concerned with the administration of other universities.

The findings of the committee are conservative to an astonishing degree. They suggest that the signs of the times have not been fully understood. Educators are becoming conscious that the large schools have outgrown the small-college type of organization, in which the president is responsible for most of the operating details. The faculties are stirring uneasily as they discover that a rigid vertical line of executives appointed by a board of trustees inevitably means in a large school stereotyped instruction and the submergence of individuality. Students are still dissatisfied with the nature of the supervision to which they are subjected. In view of these conditions it is remarkable that a faculty

committee should find that "the time and interest of the faculty members should be conserved for the work of instruction and research and should not be dissipated in administrative and executive functions." This is not the view taken by most educators. It is understood that neither the faculty nor the students can be given authority for which responsibility cannot be assumed, and that the time of the staff member as well as the time of the student should be conserved, but is it desirable to insist that "faculties should control the policies—curriculums, instructional procedures, research programs, and the like—which govern instruction and research" simply as legislators and have nothing to do with putting their decisions into operation? It is true that "in the type of organization which prevails in American universities, the final responsibility for questions pertaining to education as well as to other matters must lie with the board of trustees," but at this point the school differs from business, in which the directors are expected to act only in the interests of the stockholders, in that the trustees and faculty are equally responsible to society and to the student. Members of faculties are supposedly educational experts. They may, then, be safely trusted not only to discuss policies and administrative procedure but actually to take part in administration and to exercise executive authority. It may even be argued with cogency that, if the educator is as interested as he should be in the progress of his profession, he will profit by opportunities to test his opinions and experiment in educational procedures. Common sense would dictate that this conclusion does not mean that every staff member can be a law unto himself or that an institution can operate with every person trying to be a dean. It does mean, however, that, within properly circumscribed spheres, every member of the staff would have administrative responsibilities and that the faculties would assist in executive activities.

At the University of Michigan, it is believed that proper participation in administration is accorded the faculty by placing each school or college under the direction of a dean, assisted by an executive committee selected by the regents from a panel nominated by the faculties, and by placing other activities under directors assisted by advisory committees selected by the president from panels nominated by the University council. It is further believed that, as far as possible, each staff member should be given administrative responsibilities, and that every effort should be made to give executive officials time for instruction and research. The curse of modern university administration has been the attempt to set up two groups of staff members—the administrative and the instructional. Much of the discussion has been academic and the distinctions often imaginary, but a tendency toward a double staff has been discernible. It is believed that the best interests of education will be served if our universities are operated by closely knit organizations of educators rather than by dual staffs of instructors and executives.

The plan of having in large universities several vice-presidents responsible for major administrative functions is used in the University of Chicago. As in some other institutions, one of these officers co-operates with the president in matters pertaining to educational administration and is known as vice-president and dean of the faculties. This is an important and necessary office, but it is likewise true, to quote from the report, that the president "cannot delegate the final supervision of the educational function to another officer without creating a feeling of disappointment among the deans and faculty members." The solution of this problem would seem to be to free the office from all executive responsibilities, making it solely advisory to the trustees, the president, and the members of the faculties.

To educators outside the University of Chicago, as has been said, many of the details of organization discussed by the committee will be of little interest. They can scarcely be criticized intelligently

since they doubtless reflect, to some extent, tradition and peculiar conditions. One may remark, however, that, if the recommendations in regard to the office of secretary of the university are carried out, the incumbent of that office will be a busy man. Again, it will be difficult to convince the experienced educator that the recommended relationship between the office of the dean of students and the deans of the schools and colleges is one that will operate without friction. Not less but more intimate contact between deans and students would seem to be desirable. Again, while the committee recognizes that the office of dean of students has important functions, one must confess a feeling of regret that some attention has not been given to the vital and puzzling problem of student government, particularly in view of the statement that

> it has been recognized quite generally in colleges that the largest values accrue to students where there is a maximum of student self-direction in the management of these non-curricular activities. Only such institutional direction and control of activities should be organized as is required to secure from them a maximum of helpfulness and a minimum of trial and error wastes.

The major conclusions are four, only one of which, the creation of a division of public relations, will be of general interest. Far more important to the educator is the recognition throughout the report that there are fairly distinct major divisions of function in a modern university, that administrative officers should function as experts, and that, although president and trustees should have final jurisdiction over university affairs, "any educational policy will succeed or fail to about the extent represented by the sympathetic understanding and approval given to it by the leading members of the faculties." Having gone this far, the committee has left it to other institutions to demonstrate that, while executive officers are necessary, a form of organization which gives to faculties a voice in appointing committees with executive powers to work with but not over the officers is preferable to one in which executive functions are performed by appointees of trustees and faculty participation in administration is limited to the legislative functions.

A. G. Ruthven
University of Michigan

The University Faculty, *by Floyd W. Reeves, Nelson B. Henry, Frederick J. Kelly, Arthur J. Klein, and John Dale Russell.* Chicago: University of Chicago Press, 1933. xxv+326 pp. (University of Chicago Survey, Vol. III) $3.00.

Some years ago the General Education Board gave the University of Chicago funds for a self-survey. The results are now being published in a series of volumes, of which this is the third. It deals with the teaching staff of the institution, its organization, activities, and problems.

Although realizing that some of the most important characteristics of a university faculty do not lend themselves to any form of exact measurement, those in charge of the survey have felt that significant information could be obtained by compiling accurate data concerning the educational training and experience of the staff, the scholarly publications of its members, their teaching-loads, their rates of pay and promotion, in fact, all readily calculable factors affecting the work and welfare of this great body of scholars.

The results are well worth the effort as this volume proves. In most instances the detailed figures bear out what anyone familiar with the University would have surmised, but in some cases the tabulations point to things which might not have been expected. A large majority of the staff, of course, were found to be in possession of advanced degrees, but in a few departments the teachers did not appear to have "the usually accepted qualifications, so far as these are measured by degrees held." The report takes care to point out, however, that inferior qualifications are not necessarily to be

inferred from the lack of a Doctor's degree.

The members of the University of Chicago faculty have been drawn from a wide variety of institutions, but in as much as more than half of them hold Chicago degrees the report concludes that "extensive inbreeding has taken place." Approximately one-fourth of the faculty members were found to have published nothing during the past five years. The median age of the teachers has been declining, especially in the lower ranks. There is complaint that the normal teaching-load is too heavy for men who are doing research work, but actions looking toward a redistribution so that those not engaged in research should do more teaching have not been successful. Recently there has been provision for the appointment of teachers on a four-quarter basis, with the understanding that the University is to collect any outside remuneration for services rendered.

These and many other findings will be of interest to a considerable circle of readers. The discussion of them is both fair and forthright. Many relevant statistical data have been gathered and are presented in cogent form. All in all, there are not many persons concerned with higher education who will not find something of interest to them in this book.

WILLIAM B. MUNRO
California Institute of Technology

Teachers Should Read It

THE PROPAGANDA MENACE, *by Frederick E. Lumley*. New York: Century Company, 1933. ix+454. $3.00.

This book traces the slimy trail of propaganda through industry, politics, war, patriotism, race, education, and religion. They are all permeated by it. The man on the street uses the term as an epithet. To him propaganda is anything with which he disagrees, especially when it threatens his cherished ideals or possessions. After criticizing numerous attempts to delimit it more sharply, the author proposes this definition: "Propaganda is promotion which is veiled in one way or another as to . . . its origin or sources, . . . the interests involved, . . . the methods employed, . . . the content spread, and . . . the results accruing to the victims" (page 44).

He shows at length how propagandists camouflage their activities under fine-sounding names and fake organizations, how they use all mechanical means of communication and all kinds of literary and artistic talent to promote their selfish interests by suppression, distortion, diversion, and outright fabrication. The results are all about us in the lives of people—fear-ridden, suspicious, full of hate, cruelty, intellectual enslavement; results also appear in "social perturbations," that is, mass manifestations of these personal traits. "In sum, the results of propaganda correspond in many particulars with the results of a stalwart belief in the omnipresence of innumerable disembodied spirits, . . . a modern substitute for these powerful, mostly malignant, and potently devastating powers. . . . Propaganda makes the social order spooky" (page 390).

The outlook would be black indeed were there not some natural limitations to the power of propaganda. Fortunately, propagandists are frequently ignorant, stupid, shortsighted, and short of money. They set up negative reactions to their own promotions, make themselves ridiculous, and rouse a negative public opinion which sometimes destroys them. Sometimes legal restraints may be invoked; many people are too dull, too preoccupied, or too alert to be taken in; sometimes an emotional recoil, or an exhaustion of receptivity, or actual negativistic reactions occur. Finally, the author suggests that real education, the kind that liberates intelligence, that makes men critical minded in social affairs, that insists upon the removal of intolerable social conditions, that drains the paludal social fens which breed propaganda-receptive minds as dung heaps breed flies, such education may save society from the menace of propaganda.

This is the job of the true educator.

If he can rebuild the curriculum so that every citizen will be taught the facts regarding social phenomena, that they are natural and capable of being dealt with like other natural phenomena, the day may come soon when this propaganda menace will be as extinct as the menace of old-time magic in medicine and morals; a time may come when men will demand facts as a basis for social policies and will insist that social programs be formulated and administered by men who know the nature of social phenomena. There can be no rational social life on this planet until political, religious, educational, and industrial shysters, crooks, and ignoramuses are replaced by social artists and social engineers, until social magic-mongering is superseded by social science.

Educators and parents must face this fact and accept this responsibility. Unless the achievement of social intelligence is possible, our civilization is most certainly doomed. The real menace of propaganda is that it may prevent the emergence of enough social intelligence soon enough to save us from tragic disasters.

READ BAIN
Miami University

A False Label

WHAT KIND OF COLLEGE IS BEST? *by Myron M. Stearns.* New York: John Day Company, 1932. 78 pp. $1.25.

The only reason for reviewing this book is to save the readers of the JOURNAL from wasting their money and their reading time on it. The American public is college conscious, and a volume with a title such as this will attract the attention of many of the tens of thousands of parents who are wondering how best to choose a college for their sons and daughters. That will be too bad. The book is not worth the cost of the paper in it let alone the cost of the printing, proof-reading, editing, booksellers' commissions, publisher's profit, the retailer's profit, and royalties.

A stricture as broad as this requires exemplification. One may start with the opening sentence: "There are five kinds of colleges in the United States." These the author asserts to be technical schools, state universities, large colleges, small colleges, and co-operative colleges. He is apparently ignorant of the existence of agricultural colleges, colleges of commerce, of dentistry, veterinary medicine, nursing, library science, education, and the several hundred junior colleges. He does refer to law schools, medical and dental colleges, but these he passes over hastily and indifferently. For him the only kinds of colleges are arts colleges and engineering schools, although a huge fraction of the million students in institutions of American higher education are registered for study in other types of curriculums. This is merely illustrative of the entire book.

Obviously, no one can write a volume for high-school students and their parents which does not array before them the more than a dozen types of collegiate training that the colleges offer. Nor can one write honestly without discussing admission requirements, the vocations for which the various types of colleges prepare, coeducation, how colleges differ from high and preparatory schools in their teaching, why some students fail, and why others should never attempt a college course.

A book that does not assess these considerations is parading under a false label when it has the title *What Kind of College Is Best?* Moreover, the topics that the author does discuss are handled briefly, and in some places so erroneously that they are neither reliable nor valid. He has little to say about self-support and dogmatizes that at Yale, Harvard, and Princeton (which he dubs the "club colleges") it is not possible or desirable to earn one's own expenses. This is, of course, ridiculous. The reviewer has just seen the statistics on self-support at Yale. More than two thousand members of the student body at New Haven are earning all or a good part of their expenses, and last year accounted for more than half a million dollars' worth of labor. The Princeton and Harvard figures may not be so imposing, but they

belie the author's sweeping statement. Similarly, the placement officers of these institutions could easily cite numerous examples of students who earn their expenses and who are still academically successful and socially popular.

Many other sciolisms might be listed and discussed. These are perhaps enough. If the book has any value it is this: it demonstrates the futility of a free-lance writer trying to do anything with a technical topic such as this without the assistance of experts who know the facts or where to find them.

W. H. COWLEY
Ohio State University

A Reprint

SKETCHES FROM CAMBRIDGE, *by Leslie Stephen*. London, England: Oxford University Press, 1932. xi+98 pp. $1.75.

Sketches from Cambridge is a collection of essays written seventy years ago and published first as a series of articles in the *Pall Mall Gazette*. The author at that time was a young don of Trinity Hall. He was experiencing a period of intellectual ferment which resulted in severing his relations with the College and University. He was becoming too liberal, and sincerity motivated his action in leaving Cambridge to take up a literary career in London.

There is no attempt to give a complete picture of the life at Cambridge of that day. A number of salient aspects are drawn out from random interests. The author was athletically inclined. Several of his chapters are devoted to athletic sports. Others relate to the reading men, the Union, or debating societies, the life of dons, tutors, and heads of colleges. These sketches are not at all applicable to the Cambridge of our time.

The book is valuable purely from a historical and literary viewpoint. The author expressly disclaims the rôle of reformer. Nevertheless, his comments, abundant with scintillating wit of the subtle British type, bordering often on satire, are really a critical attempt to evaluate the program and procedure of Cambridge of that day. Remarks that were undoubtedly radical are toned down in the guise of levity. It is interesting to compare these with current criticism, as the author would not be regarded as dangerous or even abnormally liberal in our time.

Anyone desiring to spend an hour or two in real literary diversion will derive much satisfaction from this little volume. It is in no sense a guide to present-day Cambridge. As an old Oxonian, I have found the contrast, to which the author frequently reverts, between the institutions on the banks of the Cam and the Isis, respectively, most interesting. For example, he suggests Gladstone as the typical product of Oxford, and Macaulay as representative of the best in Cambridge. On the whole, he seems to feel that Oxford belongs to the realm of the speculative and philosophical brought to a high degree of polish, while Cambridge possesses more of the practical and scientific turn of mind.

JNO. J. TIGERT
University of Florida

The Unit-Cost Plan of College Finance

HAMILTON HOLT

[*Continued from page 357*]

The adoption of the Unit-Cost Plan is the logical next-step in the Rollins ideal of a cultural college with a limited student body, a faculty devoted to humanized teaching, a physical plant designed as much for beauty as efficiency, and all adequately and scientifically financed, first, by those who are receiving the most benefit from it, and second, by those who are able to appreciate a genuine opportunity for wise giving.

In the Lay Magazines

"Does Education Need Its Face Lifted?" by Dorothy C. Reid, *Pictorial Review*, September, 1933.

Off with the old ideas if they are not good and on with the new that have proved to be good, is the philosophy here expressed and the course of action recommended. Education has not changed to fit the times and it should, it must! The traditional subjects should be taught if there is value in them, otherwise not, and traditional methods should be followed with due discrimination. Many colleges have adopted the honors plan by which after two or three years of regular work students may volunteer for a degree with honors. They must have demonstrated through their previous work that they have the intellectual ability, the initiative, and the self-discipline, before they are allowed to assume this task. The honors course is an innovation in education; it is working, and it has been "largely instrumental in eliminating that supersophomore attitude prevalent among college graduates."

Most boys and girls attend college nowadays with a view to "making" themselves as soon as possible, and at one time not so far off a college degree was a practical assurance of a good position. But "the old order changeth," and today careful methods of selection look back of the college degree; mere possession of it is not enough.

And so the question "What is the matter with our colleges?" must be answered, and once the answer is found something must be done to fit education to the needs of the day. "Our educational centers, by their own admission, need new trends in their old college traditions."

"A Recent Graduate Says It Does," by Josephine Kate Newton, *Pictorial Review*, September, 1933.

Here is a frank, stimulating article from the pen of one who has been through the mill. Education does need changes, she admits, but she fails to say what the changes should be. She is dissatisfied with her education, in fact, she really believes she would have been better off without it. College life, she says, is a glorified existence which has no real bearing on life situations, the values it teaches and the standards it raises are unreal and false. Her course of study did not fit her to take a good job, and she thinks it unfitted her for marriage.

Miss Newton is perhaps too recent a college graduate. She will probably find that each year out of college will change her perspective, and in some future time she may wonder why she ever felt as she does now. It is probably not too great a risk to say that nine out of ten college women who have been out for several years would disagree radically with this young lady, and, they would be women from all walks of life.

Maybe the type of education she received was wrong for her, perhaps it did not fit her for anything, perhaps education does need to be changed, it still seems a little unfair for her to damn the whole system because hers failed to stand her in good stead.

"College and the White Collar," by P. W. Wilson, *North American Review*, July, 1933.

The white collar again! Mr. Wilson comes to the front to say that we are not giving our youth a square deal. Something is wrong somewhere. We send our children to college, and we have no assurance to give them that work of the sort for which we are fitting them will be available when they come out. Our colleges are becoming the "thresholds of disillusion." They are becoming a place to stay for four years, a means of postponing the inevitable facing of the reality of having to get a job in order to eat. And, too, What of those who do not even graduate, who "fall by the wayside?" What for them? Discouragement, yes, and disillusion, and what kind of work?

Mr. Wilson thinks that for this reason

the raising of college-entrance requirements would be wise. Were we to raise the standard, would we not evolve a brain aristocracy with proved intellects and capabilities, would we not have selected the superior from the average? Youth is beginning to revolt. Something must be done if its capacities are to be devoted to purposes worthy of their generation.

"Racketeering on Parnassus," by H. W. Whicker, *North American Review*, June, 1933.

Questions seem to be the order of the day, and here is another author who has some to be asked, and answered. Do our schools and colleges justify their claim to one-fourth of the American tax dollar? What have we received for the vast amounts of money we spend on education? Have we got our money's worth?

No, says Mr. Whicker, and we will not until the "racketeers of educational psychology and scholasticism are driven from Parnassus" and our schools can breathe some good, clean air unbefouled by the breath of the so-called professor whose students worry him not at all, and whose time is given over to "creative scholarship." It is to wonder if, perhaps, Mr. Whicker is not a little too severe, and, also, whether, like the racketeers, he is not using a few too many catchwords and phrases, as when he says of our teachers:

In the masses chuting through higher institutions of learning he saw spinster ladies lacking the sex appeal to attract mates, and countless hosts of the opposite gender lacking the courage and initiative to face life beyond college walls, and he knew that they would welcome the opportunity for a livelihood in peddling his mental moonshine to elementary schools.

MARY MARGARET DODD

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REHEARSE

To Harrow Again

The farmer, after plowing his field, goes over it with a harrow to break up the clods and level the ground. Sometimes, in order to make the field still smoother, he harrows it over again.
Old French *herce* meant "a harrow," *hercier* "to harrow," and *rehercier* "to harrow over again," borrowed in Middle English as *rehercen*, Modern English *rehearse*. Now we *rehearse*, not the plowed field, but a speech, a play, or the like.
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